Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 04.07.94 Edition : ISO 4113 Test oil

Combination No. : 0402646881

Injection pump

Pump designation : PE6P120A720RS7176

: -10

: 0412626929 EP type number

Governor

Governer design. : RQV300...900PA795-4

: 0421813888 Governer no.

Cust. part No. :

Customer-spec. information Customer : SCANIA

Motor : DS11

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

: 1417413025 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901019

Opening pressure

208.5 Tolerance bar : **←** 1.5

: 1680750015 Test lines

Outside diameter : 6.0

x inside diameter: 3.0

AO1

x Length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Prestroke mm : +- 0.05 Tolerance mm

test anly : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5- 3- 6- 2-: 4 Firing order

: 0-60-120-180-240 Phasing : -300

Tolerance : + 0.50

Check tolerance *NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 14.15 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 235.0

Tolerance

cm3/1000 strokes : +-1.0

		•	
Check tolerance		+	700
cm3/1000s.	: +- 4.0	+ Rated speed rpm	: 700
	****	+ Aneroid pressure	
Spreed		+ hPa	: -
Tolerance		+ Del. quantity	
cm3/1000 strokes	: 6.0	+ cm3/1000 strokes	: 235.0
		+ Tolerance	
Check tolerance		+ cm3/1000 strokes	: +- 1.0
cm3/1000S.	: 9.0	+ Check tolerance	
	. ,	+ cm3/1000s.	: +- 4.0
Del. quantity		Spreed	4.0
cm3/1000 strokes	. 17.0	+ Tolerance	
Tolerance	. 17.0	- cm3/1000 strokes	. 40
cm3/1000 strokes			. 0.0
	: - 2.0	+ Check tolerance	0.0
Spreed		+ cm3/1000s.	: 9.0
Tolerance	7.0	†	
cm3/1000 strokes			
Check tolerance		+ RATED SPEED	
cm3/1000s.	: 6.0	+	
		+	
		+ control lever	
(B) SETTING OF IN	JECTION PUMP	+ position degree	: 50.0
WITH GOVERNOR		tolerance degree	· + 4.0
		1	
		+ control lever	
GUIDE SLEEVE TRAV	E 1	position degree	. 97.0
GOIDE SEEEVE TRAV		+ tolerance degree	: + 7.0
Dated aread man	: 300	T toterance degree	. +- 4.0
Rated speed rpm	: 300	T	47.40
guide sleeve	4 50	+ rack travel mm	
travel mm	: 1.50	+ Rated speed rpm	
Tolerance mm	: ← 0.20	Tolerance 1/min	: +- 5
		+	
Rated speed rpm	: 945	+ rack travel mm	
guide sleeve		+ Rated speed rpm	: 1045
travel mm	: 8.00	+ Tolerance 1/min	: ← 15
Tolerance mm	: ← 0.10	+	
		+ rack travel mm	: 0.50
Rated speed rpm	: 350	+ Tolerance mm	: +- 0.50
guide sleeve		Rated speed rpm	
travel mm	• 2.20	T Marca speed 1 pm	. (136
Tolerance mm	· + 0.30	<u> </u>	
roter a ice iiiir	0.30	LOW IDLE	
Rated speed rpm	. 450	I com loce	
		T	
guide sleeve travel mm	. 500	T amenal laws	
travel mm	. 5.00	control lever	45.0
Tolerance mm	: +- 0.30	position degree	: 65.0
	•	tolerance degree	: ← 4.0
		†	
GUIDE SLEEVE POSI	TION .	+ castrol lever	
	•	position degree	: 17.0
		† tolerance degree	: +- 4.0
control lever		+	
position degree	:-1	Testing:	
position degree Rated speed rpm	: 970	+	
-1		Rated speed rpm	: 300
Rack travel in mm	: 12.80	rack travel mm Tolerance mm	4.50
Tolerance mm		Tolerance mm	÷ ← 0.10
. Section to the		TOCCIONICE IMI	
		rack travel mm	. 2 00
FILL LOAD DELTHED	Y AT FULL LOAD STOP	Rated speed rpm	. 740
I OLL LUND DELIVER	I AT FULL LUAD STUP	T varen sheen thu	. 300

A02

Tolerance 1/min	-	‡	Spreed Tolerance		7.0
Rated speed rpm	: 100	Ī	cm3/1000 strokes Check tolerance	:	3.0
CRT mm min.	: > 10.00	<u> </u>	cm3/1000s.	:	6.0
TORQUE CONTROL					
Rated speed rpm rack travel mm Tolerance mm	: 14.15	Ī			
Rated speed rpm rack travel mm Tolerance mm	: 900 : 14.15 : ← 0.05	<u> </u>			
ENT DE TIEDY CHA	NACTED OTTO	‡			
FUEL DELIVERY CHA	WACTERT21TC2	‡			
Aneroid pressure hPa Rated speed rpm	: - : 900	‡			
Del. quantity cm3/1000 strokes	: 224.0	‡			
Tolerance cm3/1000 strokes		+			
Check tolerance cm3/1000s.		Ŧ			
BREAKAWAY	 	—— <u> </u>			
Rack travel in mm Rated speed rpm Tolerance 1/min		† † †			
STARTING FUEL DEL	IVERY	 ‡			
Rated speed rpm Tolerance mm	: 100 : + 0.10	Ŧ			
Del. quantity	-	Ŧ			
cm3/1000 strokes Tolerance	: 300.0	1			
cm3/1000 strokes	: + 25.0	‡			
		‡			
LOW IDLE		+			
Del. quantity cm3/1000 strokes	: 17.0	Ŧ			
Tolerance cm3/1000 strokes	: ← 2.0	‡			

A03

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 20.10.94 : ISO 4113

Combination No. : 0402646885

Injection pump

Pump designation : PE6P12OA72ORS7126

: -10

EP type number : 0412626929

Governor

Governer design. : RQV350...1050PA795

: -9

Governer no.

: 0421813769

Cust. part No. : 1305080

Customer-spec. information

Customer

: SCANIA

Motor

: DS11 54,57

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1688901019

Opening pressure

bar

Tolerance bar

Test lines : 1680750015

Outside diameter : 6.0

x inside diameter : 3.0 x Length mm :

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 31.0

Tolerance bar : + 1.0

Prestroke mm

: **←** 0.05 Tolerance mm

test only

: + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order

: 1-5-3-6-2-

Phasing

: 0-60-120-180-240

: -300

Tolerance

: + 0.30

Check

tolerance °NW

: + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm :

700

Rack travel in mm: 14.15

Tolerance mm : + 0.05

Del. quantity + cm3/1000 strokes : 235.0 +	Spreed Tolerance
	cm3/1000 strokes : 6.0
Tolerance cm3/1000 strokes : +- 1.0	Check tolerance cm3/1000s. : 9.0
Check tolerance cm3/1000s. : + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 6.0	control lever position degree : 54.0
Check tolerance	tolerance degree : +- 4.0
cm3/1000s. : 9.0	control lever position degree : 102.0
2nd speed rpm : 350	tolerance degree : +- 4.0
Rack travel in mm: 4.40 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 17.0	rack travel mm : 13.10 Rated speed rpm : 1095 Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : +- 2.0 check tolerance	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : +- 15
cm3/1000S. : + 4.0 + Tolerance + 4.0	rack travel mm : 0.50 Tolerance mm : + 0.50
cm3/1000 strokes : 3.0 + Check tolerance	Rated speed rpm : 1350
cm3/1000s. : 6.0 +	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 72.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	control lever position degree : 23.0 tolerance degree : + 4.0
control lever position degree : -1 Rated speed rpm : 1230	Testing:
Rack travel in mm : 16.50 Tolerance mm : + 1.30	Rated speed rpm : 350 rack travel mm : 4.40
	Tolerance mm : \leftarrow 0.30
FILL LOAD DELTVEDY AT FULL LOAD STOD	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	
Rated speed rpm : 700 Aneroid pressure hPa : -	Rated speed rpm : 100
Rated speed rpm : 700 Aneroid pressure	Rated speed rpm : 100 CRT mm min. : > 10.00

Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 14.15 : +- 0.05 : 1000
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 900 : 14.15 : ← 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 500 : 10.70 : ← 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 510 : 13.05 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 250 : 11.20 : ← 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
Rated speed rpm Del. quantity	1000
cm3/1000 strokes Tolerance	: 227.0
cm3/1000 strokes Check tolerance	: +- 4.0
cm3/1000s.	: ← 6.0
Aneroid pressure	: -
Rated speed rpm Del. quantity cm3/1000 strokes	: 500 : 152.0
Tolerance cm3/1000 strokes	: +- 2.0
Check tolerance cm3/1000s.	: + 4.0

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BREAKAWAY

Rack travel in mm : 13.10
Rated speed rpm : 1095
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 300.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance

: +- 24.0

LOW IDLE

cm3/1000s.

Rated speed rpm rack travel mm Tolerance mm	:	+	350 4.40 0.30
Del. quantity cm3/1000 strokes Tolerance	:		17.0
cm3/1000 strokes Check tolerance	:	+-	2.0
cm3/1000s. Spreed	:	+-	4.0
Tolerance cm3/1000 strokes Check tolerance	:		3.0
cm3/1000s.	:		6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 05.10.94 Edition : ISO 4113 Test oil

Combination No. : 0402646892

Injection pump

Pump designation : PE6P120A720RS7170

EP type number : 0412626829

Governor

Governer design. : RQ900PA758-12 Governer no. : 0421801500

Cust. part No. : 1305084

Customer-spec. information Customer : SCANIA : DS 11 Motor

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : 1.5

Test nozzle holde

: 1688901019 assembly

Opening pressure

bar Tolerance bar

Test Lines : 1680750015

Outside diameter : 6.0

x inside diameter: 3.0 600 x length mm :

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 5.05 Tolerance mm

test only : + 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

: 1-5- 3- 6- 2-: 4 Firing order

Phasing : 0-60-120-180-240

: -300 : +- 0.50 Tolerance

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

850 Rated speed rpm :

Rack travel in mm: 12.55 : + 0.05Tolerance mm

Del. quantity cm3/1000 strokes : 247.0

A07

Tolerance cm3/1000 strokes : + 1.0
Check tolerance cm3/1000s. : + 4.0
Spreed Tolerance cm3/1000 strokes : 7.0
Check tolerance cm3/1000s. : 10.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR
FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 850
Aneroid pressure hPa : 900
Del. quantity cm3/1000 strokes : 247.0
Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : +- 4.0 Spreed
Tolerance cm3/1000 strokes : 7.0
Check tolerance cm3/1000s. : 10.0
RATED SPEED
control lever position degree : 86.0 tolerance degree : +- 4.0
TORQUE CONTROL
Rated speed rpm : 850 rack travel mm : 12.55 Tolerance mm : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST
SETTING
Rated speed rpm : 500

80A

Pressure hPa	: 900
rack travel mm	: 12.55
Tolerance mm	: ← 0.05
MEASUREMENT	
Pressure hPa	: -
Rated speed rpm	: 500
rack travel mm	: 9.90
Tolerance mm	: + 0.20
Rated speed rpm	: 500
Pressure hPa	: 575
rack travel mm	: 12.05
Tolerance mm	: ← 0.05
Pressure hPa	: 370
rack travel mm	: 10.85
Tolerance mm	: + 0.15

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	-
Rated speed rpm	:	50 0
Del. quantity		
cm3/1000 strokes	:	152.0
Tolerance		
cm3/1000 strokes	: +	- 2.0
Check tolerance		
cm3/1000s.	: +	- 4.0

STARTING FUEL DELIVERY

Rated speed rpm rack travel mm Tolerance mm	: +	100 9.90 - 0.20
Del. quantity cm3/1000 strokes Tolerance	:	110.0
cm3/1000 strokes	• +-	- 20.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 04.07.94

Test oil

: ISO 4113

Combination No. : 0402646909

Injection pump

Pump designation: PE6P120A320RS7138

: -10Z

EP type number : 0412626923

Governor

Governer design. : RQV200...1100PA712

: -5

Governer no.

: 0421813951

Cust. part No. : 1318819

Customer-spec. information Customer : SCANIA

Motor

: DS9 07

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 1417413025

Inlet press. bar :

Tolerance bar

Test nozzle holde

assembly

: 1688901104

Opening pressure

bar

251.5

Tolerance bar

Test lines

: 1680750008

Outside diameter :

6.0

REMARKS

x inside diameter:

x length mm

Check and set without ROBO diaphragam

2.0

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar $: \leftarrow 1.0$

Prestroke mm Tolerance mm : + 0.05

test only : **←** 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300 : + 0.30Tolerance

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm :

700

Rack travel in mm : 11.85

Tolerance mm : + 0.05

Del. quantity +	Spreed
cm3/1000 strokes : 151.0	Tolerance
+	cm3/1000 strokes : 8.0
Tolerance	Check tolerance
$cm3/1000$ strokes : \leftarrow 1.0	cm3/1000s. : 12.0
Check tolerance +	
cm3/1000s. : \leftarrow 4.0	RATED SPEED
Spreed	
Tolerance	control lever
cm3/1000 strokes : 8.0 +	position degree : 61.0
+	tolerance degree : +- 4.0
Check tolerance	
cm3/1000s. : 12.0 +	control lever
2nd speed way 250	position degree : 116.0
2nd speed rpm : 250	tolerance degree : +- 4.0
Rack travel in mm: 4.60	rack travel mm : 10.80
Tolerance mm : + 0.30	Rated speed rpm : 1145
Del. quantity	Tolerance 1/min : + 5
cm3/1000 strokes : 16.0	Toterance Thinti . The J
Tolerance	rack travel mm : 4.00
cm3/1000 strokes : + 3.0 +	Rated speed rpm : 1285
Check tolerance	Tolerance 1/min : + 15
cm3/1000s. : + 6.0	
Spreed	rack travel mm : 0.50
Tolerance	Tolerance mm : + 0.50
cm3/1000 strokes : 4.0	Rated speed rpm : 1400
Check tolerance	
cm3/1000s. : 8.0 +	
+	LOW IDLE
	
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	control lever
†	position degree : 64.0
†	tolerance degree : + 4.0
CUITAE SUEDIE PASTITANI	control lavos
GUIDE SLEEVE POSITION	control lever position degree : 9.0
Ť	position degree : 9.0 tolerance degree : +- 4.0
control lever	toterance degree : + 4.0
position degree : -1	Testing:
Rated speed rpm : 1130	restring.
Tarea speed (pil)	Rated speed rpm : 250
Rack travel in mm: 16.50	rack travel mm : 4.60
Tolerance mm : + 1.30 +	Tolerance mm : + 0.10
1.55	100014100 11111
	Rated speed rpm : 150
FULL LOAD DELIVERY AT FULL LOAD STOP	
+	CRT mm min. : > 5.80
Rated speed rpm : 700 +	
Aneroid pressure +	
hPa : - +	CONTINUOUS-ACTION CONTROL
Del. quantity	
cm3/1000 strokes : 151.0 +	Rated speed rpm : 250
Tolerance +	
cm3/1000 strokes : + 1.0 +	TODOUG CONTROL
Check tolerance	TORQUE CONTROL
cm3/1000s. : \leftarrow 4.0 $+$	

Rated speed rpm rack travel mm Tolerance mm	: 700 : 11.85 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 11.85 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 11.85 : +- 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 10.10 : ← 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 350 : 11.55 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 220 : 10.80 : + 0.15
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa Rated speed rpm	1100
Del. quantity cm3/1000 strokes Tolerance	: 149.0
cm3/1000 strokes Check tolerance	:
cm3/1000s.	: 6.0
Aneroid pressure	: -
Rated speed rpm	: 500
Del. quantity cm3/1000 strokes Tolerance	: 116.0
cm3/1000 strokes Check tolerance	: ← 1.0
cm3/1000s.	:

BREAKAWAY

Rack travel in mm: 10.80 Rated speed rpm : 1145
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.10
Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 130.0 Tolerance cm3/1000 strokes : + 20.0Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm	:	250
rack travel mm	:	4.60
Tolerance mm	: +-	0.30
Del. quantity		
cm3/1000 strokes	:	16.0
Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	4.0
Check tolerance		
cm3/1000s.	•	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.07.94 Test oil : ISO 4113

Combination No. : 0402646910

Injection pump

Pump designation : PE6P120A320RS7138

: -10

EP type number : 0412626922

Governor

Governer design. : RQV200...1100PA712

: -5

Governer no. : 0421813951

Cust. part No. : 1318823

Customer-spec. information Customer : SCANIA Motor : DSC908

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1688901104 assembly

Opening pressure

: 251.5 : + 1.5 bar Tolerance bar

Test Lines : 1680750008

Outside diameter : 6.0

x inside diameter: 2.0 x Length mm ;

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.45 Tolerance mm : + 0.05

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5- 3- 6- 2-: 4 Firing order

: 0-60-120-180-240 Phasing

: -300

: ← 0.30 Tolerance

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 13.15

	. (2002)
Del. quantity	+ Spreed
cm3/1000 strokes : 180.0	+ Tolerance
	+ cm3/1000 strokes : 8.0
Tolerance	+ Check tolerance
cm3/1000 strokes : + 1.0	+ cm3/1000s. : 12.0
the root strongs in the	1
Check tolerance	
	DATES COURS
$cm3/1000s.$: \leftarrow 4.0	+ RATED SPEED
	†
Spreed	+
Tolerance	+ control lever
cm3/1000 strokes : 8.0	+ position degree : 63.0
	+ tolerance degree : + 4.0
Check tolerance	
cm3/1000s. : 12.0	+ control lever
(III) 10003 12.0	
2nd	position degree : 118.0
2nd speed rpm : 250	+ tolerance degree : + 4.0
	†
Rack travel in mm: 4.60	+ rack travel mm : 12.10
Tolerance mm : ← 0.30	+ Rated speed rpm : 1145
Del. quantity	+ Tolerance 1/min : + 5
cm3/1000 strokes : 16.0	1
Tolerance	+ rack travel mm : 4.00
cm3/1000 strokes : +- 3.0	Rated speed rpm : 1290
Check tolerance	+ Tolerance 1/min : + 15
$cm3/1000s.$: \leftarrow 6.0	†
Spreed	+ rack travel mm : 0.50
Tolerance	+ Tolerance mm : + 0.50
cm3/1000 strokes : 4.0	+ Rated speed rpm : 1400
Check tolerance	1 Hacea speca i piii : 1400
cm3/1000s. : 8.0	Τ
CIID/ (UUUS. : 0.U	
	+ LOW IDLE
	†
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	+ control lever
	+ position degree : 64.0
	+ tolerance degree : +- 4.0
	1
GUIDE SLEEVE POSITION	control lever
COINT SECTAT LOSTITUA	
	+ position degree : 9.0
	+ tolerance degree : +- 4.0
control lever	†
position degree : -1	+ Testing:
Rated speed rpm : 1130	<u> </u>
,	+ Rated speed rpm : 250
Rack travel in mm : 16.50	+ rack travel mm : 4.60
Tolerance mm : + 1.30	Tolerance mm : + 0.10
TO COT CATHO TO THE TABLE	TOUR CE INITION TO U. IU
	T Dated mand man 450
THE LAS SPI TIPEL ST PILL LAS AND	+ Rated speed rpm : 150
FULL LOAD DELIVERY AT FULL LOAD STOP	†
	+ CRT mm min. : > 5.80
Rated speed rpm : 700	+
Aneroid pressure	ļ
hPa : -	+ CONTINUOUS-ACTION CONTROL
Del. quantity	TOTAL TOTAL CONTINUE
cm3/1000 strokes : 180.0	Pated aroad mm . 250
	+ Rated speed rpm : 250
Tolerance	†
cm3/1000 strokes : +- 1.0	
Check tolerance	+ TORQUE CONTROL
$cm3/1000s.$: \leftarrow 4.0	+

Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.15 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 13.15 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 13.15 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	500 10.10 + 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 480 : 12.35 : + 0.05
Pressure hPa rack travel mm Tolerance mm	: 220 : 10.80 : + 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:

BREAKAWAY

Rack travel in mm : 12.10
Rated speed rpm : 1145
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 130.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm	:		250
rack travel mm	:		4.60
Tolerance mm	:	4	0.30
	•	•	0.50
Del. quantity			
cm3/1000 strokes	:		16.0
Tolerance			
cm3/1000 strokes	•	+-	3.0
Check tolerance	•	•	5.0
cm3/1000s.	:	+-	6.0
Spreed			
Tolerance			
cm3/1000 strokes			4.0
	•		4.0
Check tolerance			
cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.07.94 Test oil : ISO 4113

Combination No. : 0402646911

Injection pump

Pump designation : PE6P120A320RS7138

: -10Z

EP type number : 0412626923

Governor

Governer design. : RQ200/1100PA873-1

Governer no. : 0421801615

Cust. part No. : 1318821

Customer—spec. information Customer : SCANIA Motor : DSC9 07

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40Tolerance °C : \leftarrow 2.0

Overflow valve : 1417413025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 Tolerance : ← 0.30

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 11.85
Tolerance mm: + 0.05

Del. quantity cm3/1000 strokes : 151.0	Check tolerance cm3/1000S. : 12.0
Tolerance cm3/1000 strokes : + 1.0	RATED SPEED
Check tolerance cm3/1000s. : +- 4.0	control lever
Spreed Tolerance	position degree : 44.0 tolerance degree : +- 4.0
cm3/1000 strokes : 8.0 + Check tolerance	control lever position degree : 98.0 tolerance degree : +- 4.0
cm3/1000s. : 12.0	rack travel mm : 10.80
2nd speed rpm : 250	Rated speed rpm : 1145 Tolerance 1/min : +- 5
Rack travel in mm: 4.60 + Tolerance mm: + 0.30 +	
Del. quantity + cm3/1000 strokes : 16.0 + Tolerance	rack travel mm : 4.00 Rated speed rpm : 1305 Tolerance 1/min : +- 15
cm3/1000 strokes : + 3.0 Check tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50
cm3/1000s. : + 6.0 + Spreed	Tolerance mm : +- 0.50 Rated speed rpm : 1400
Tolerance cm3/1000 strokes : 4.0 Check tolerance	LOW IDLE
cm3/1000s. : 8.0	control lever
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	position degree : 63.0 tolerance degree : +- 4.0
1	control lever position degree : 10.0
GUIDE SLEEVE POSITION	tolerance degree : +- 4.0
Rated speed rpm : 600	Testing:
Rack travel in mm: 16.50 Tolerance mm: + 1.30	Rated speed rpm : 250 rack travel mm : 4.60 Tolerance mm : +- 0.10
<u> </u>	rack travel mm : 2.00
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 340 Tolerance 1/min : +- 20
Rated speed rpm : 700 Aneroid pressure hPa : -	Rated speed rpm : 150
Del. quantity cm3/1000 strokes : 151.0	CRT mm min. : > 5.80
Tolerance cm3/1000 strokes : + 1.0	TORQUE CONTROL
Check tolerance cm3/1000s. : + 4.0 + 5	Rated speed rpm : 700 rack travel mm : 11.85
Tolerance + cm3/1000 strokes : 8.0 +	Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 11.85 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : 500 rack travel mm : 10.10 Tolerance mm : + 0.20 Rated speed rpm : 500 Pressure hPa : 350 rack travel mm : 11.55 Tolerance mm : + 0.05 Pressure hPa : 220 rack travel mm : 10.80 Tolerance mm : + 0.15 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 100 Del. quantity cm3/1000 strokes : 149.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000 strokes : + 4.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : + 4.0 Check tolerance cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0	Rated speed rpm rack travel mm Tolerance mm	: 1100 : 11.85 : ← 0.05
Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 11.85 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 500 rack travel mm : 10.10 Tolerance mm : + 0.20 Rated speed rpm : 500 Pressure hPa : 350 rack travel mm : 11.55 Tolerance mm : + 0.05 Pressure hPa : 220 rack travel mm : 10.80 Tolerance mm : + 0.15 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 1100 Del. quantity cm3/1000 strokes : 149.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s: + 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : + 1.0 Tolerance cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : 116.0 Tolerance Cm3/1000 strokes : + 1.0 Check tolerance Check tolerance		
Pressure hPa : 1500 rack travel mm : 11.85 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 500 rack travel mm : 10.10 Tolerance mm : + 0.20 Rated speed rpm : 500 Pressure hPa : 350 rack travel mm : 11.55 Tolerance mm : + 0.05 Pressure hPa : 220 rack travel mm : 10.80 Tolerance mm : + 0.15 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 1100 Del. quantity cm3/1000 strokes : 149.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s: + 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance	SETTING	
Pressure hPa Rated speed rpm : 500 rack travel mm : 10.10 Tolerance mm : + 0.20 Rated speed rpm : 500 Pressure hPa : 350 rack travel mm : 11.55 Tolerance mm : + 0.05 Pressure hPa : 220 rack travel mm : 10.80 Tolerance mm : + 0.15 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 1100 Del. quantity cm3/1000 strokes : 149.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance	Pressure hPa rack travel mm	: 1500 : 11.85
Rated speed rpm : 500 rack travel mm : 10.10 Tolerance mm : + 0.20 Rated speed rpm : 500 Pressure hPa : 350 rack travel mm : 11.55 Tolerance mm : + 0.05 Pressure hPa : 220 rack travel mm : 10.80 Tolerance mm : + 0.15 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 1100 Del. quantity cm3/1000 strokes : 149.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	MEASUREMENT	
Pressure hPa : 350 rack travel mm : 11.55 Tolerance mm : + 0.05 Pressure hPa : 220 rack travel mm : 10.80 Tolerance mm : + 0.15 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 1100 Del. quantity cm3/1000 strokes : 149.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Rated speed rpm rack travel mm	: 10.10
rack travel mm : 11.55 Tolerance mm : + 0.05 Pressure hPa : 220 rack travel mm : 10.80 Tolerance mm : + 0.15 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 1100 Del. quantity cm3/1000 strokes : 149.0 Tolerance cm3/1000s strokes : + 4.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Rated speed rpm	: 500
rack travel mm : 10.80 Tolerance mm : + 0.15 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 1100 Del. quantity cm3/1000 strokes : 149.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm	: 11.55
Aneroid pressure hPa : - Rated speed rpm : 1100 Del. quantity cm3/1000 strokes : 149.0 Tolerance cm3/1000strokes : + 4.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm	: 10.80
hPa Rated speed rpm : 1100 Del. quantity cm3/1000 strokes : 149.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	FUEL DELIVERY CHA	NRACTERISTICS
Rated speed rpm : 1100 Del. quantity cm3/1000 strokes : 149.0 Tolerance cm3/1000 strokes : +- 4.0 Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance		
cm3/1000 strokes : 149.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Rated speed rpm	•
cm3/1000 strokes : +- 4.0 Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	cm3/1000 strokes	: 149.0
cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	cm3/1000 strokes	: +- 4.0
hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 116.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance		: +- 6.0
	hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 116.0 : ← 1.0

Rack travel in mm : 10.80
Rated speed rpm : 1145
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 130.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

250 Rated speed rpm : rack travel mm 4.60 : + - 0.30Tolerance mm Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0

BREAKAWAY

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.07.94 Test oil : ISO 4113

Combination No. : 0402646927

Injection pump

Pump designation : PE6P120A320RS7138

: -10

EP type number : 0412626922

Governor

Governer design. : RQV300...900PA712-7

Governer no. : 0421813913

Cust. part No. : 1324212

Customer spec. information Customer : SCANIA

Motor : DS9 05

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750015

Outside diameter : 6.0

x inside diameter: 3.0

x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.30

Check

tolerance "NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.25 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 166.0

Tolerance cm3/1000 strokes : + 1.0	Check tolerance cm3/1000S. : 9.0
Check tolerance cm3/1000s. : + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 6.0	control lever position degree : 49.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 9.0	control lever position degree : 104.0
2nd speed rpm : 300	tolerance degree : +- 4.0
Rack travel in mm: 4.70 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 22.0	rack travel mm : 11.20 Rated speed rpm : 945 Tolerance 1/min : +- 5
Tolerance + 2.0 + Check tolerance cm3/1000s. : + 4.0 + 4.0	rack travel mm : 4.00 Rated speed rpm : 1025 Tolerance 1/min : +- 15
Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1150
cm3/1000s. : 6.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 74.8 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	control lever position degree : 15.0 tolerance degree : +- 4.0
control Lever position degree : -1 Rated speed rpm : 1000	Testing:
Rack travel in mm : 16.50 Tolerance mm : ← 1.30	Rated speed rpm : 300 rack travel mm : 4.70 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
+	CRT mm min. : > 10.00
Rated speed rpm : 700 Aneroid pressure hPa : 900	CONTINUOUS-ACTION CONTROL
Del. quantity cm3/1000 strokes : 166.0	Rated speed rpm : 300
Tolerance cm3/1000 strokes : + 1.0	
Check tolerance cm3/1000S. : +- 4.0 Spreed	TORQUE CONTROL Pated speed row : 700
Tolerance cm3/1000 strokes : 6.0	Rated speed rpm : 700 rack travel mm : 12.25 Tolerance mm : +- 0.05

Rated speed rpm rack travel mm Tolerance mm	: 900 : 12.25 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 900 : 12.25 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	500 10.80 + 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 360 : 11.85 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 250 : 11.20 : + 0.15
FUEL DELIVERY CHA	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 900 : 900 : 168.0 : ← 4.0 : ← 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 500 : 127.0 : ← 2.0

: +-

Rack travel in mm : 11.20
Rated speed rpm : 945
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 295.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm 300 rack travel mm 4.70 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 22.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +-4.0 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. 6.0

Check tolerance cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 19.01.95 : ISO 4113

Combination No. : 0402646993A

Injection pump

Pump designation: PE6P120A320LS7852-1

EP type number : 0412626910

Governor

Governer design. : RQ300/1050PA1030-18

Governer no. : 0421801746

Cust. part No. : 0230744502

Customer-spec. information : MB-NFZ Customer : 0M441 LA Motor : 250.0 Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 : ← 2.0 Toterance °C

Overflow valve : 1417413047

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1688901105 assembly

Opening pressure

: 208.5 : ← 1.5 bar Tolerance bar

Lube oil : 1409918004

Test lines : 1680750075 Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm Tolerance mm

test only $: \leftarrow 0.10$

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 6-3-5-2-4-

: 1-

: 0-60-120-180-240 Phasing

: -300-360 : + 0.30

Tolerance Check

tolerance *NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm : 15.10 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 252.0	Check tolerance : 9.0
Tolerance cm3/1000 strokes : +- 1.0	RATED SPEED
Check tolerance cm3/1000s. : +- 4.0	control lever position degree : 100.0
Spreed Tolerance cm3/1000 strokes : 5.0	tolerance degree : +- 4.0 rack travel mm : 14.10
Check tolerance cm3/1000s. 9.0	Rated speed rpm : 1098 Tolerance 1/min : + 8
2nd speed rpm : 300	rack travel mm : 4.00 Rated speed rpm : 1200 Tolerance 1/min : +- 15
Rack travel in mm : 6.20 Tolerance mm : + 0.30	rack travel mm : 0.75
Del. quantity cm3/1000 strokes : 19.0 Tolerance	Tolerance mm : + 0.75 Rated speed rpm : 1300
cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0	LOW IDLE
Spreed Tolerance cm3/1000 strokes : 6.0	control lever position degree : 74.0
Check tolerance cm3/1000s. : 10.0	tolerance degree : + 4.0
(B) SETTING OF INJECTION PUMP	Testing: Rated speed rpm : 300
WITH GOVERNOR	rack travel mm : 5.50 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION	rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20
Rated speed rpm : 600	Rated speed rpm : 200
Rack travel in mm: 20.00 Tolerance mm: + 0.80	CRT mm min. :> 8.50
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 550 Aneroid pressure hPa : 1100	Rated speed rpm : 550 rack travel mm : 15.10 Tolerance mm : + 0.05
Del. quantity cm3/1000 strokes : 252.0	Rated speed rpm : 1050
Tolerance - cm3/1000 strokes : +- 1.0 - Check tolerance -	rack travel mm : 15.10 Tolerance mm : +- 0.10
cm3/1000s. : + 4.0 - Spreed Tolerance	-
cm3/1000 strokes : 5.0	-

ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 400 Pressure hPa 1100 rack travel mm 15.10 : +- 0.05 Tolerance mm **PEASUREMENT** Pressure hPa 400 Rated speed rom rack travel mm 9.15 0.20 Tolerance ma 400 Rated speed rpm 250 Pressure hPa 10.05 rack travel mm : **←** 0.20 Tolerance mm Pressure hPa 550 13.85 rack travel mm : **←** 0.20 Tolerance mm START CUT-CUT Rated speed rpm 100 : > Check speed 1/min 80 : > Rated speed rpm : < 220 Check speed 1/min 240 : < FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1100 1050 Rated speed rpm Del. quantity cm3/1000 strokes: 240.0 Tolerance cm3/1000 strokes : ← 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes 8.0 Check tolerance cm3/1000s. 12.0 Aneroid pressure hPa

A23

Rated speed rpm Del. quantity	:		500
cm3/1000 strokes	:		135.0
Tolerance cm3/1000 strokes Check tolerance	:	+-	1.0
cm3/1000s.	:	+-	4.0
Tolerance cm3/1000 strokes Check tolerance	:		8.0
cm3/1000s.	:		12.0

BREAKAWAY

Rack travel in mm	:	14.10
Rated speed rpm	:	1098
Tolerance 1/min	•	+ 8

STARTING FUEL DELIVERY

Rated speed rpm	:	100
Del. quantity cm3/1000 strokes	:	235.0
Tolerance cm3/1000 strokes	: +-	20.0
Check tolerance cm3/1000s.	: +-	24.0

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm	:	+	300 6.20 0.30
Del. quantity cm3/1000 strokes Tolerance	:		19.0
cm3/1000 strokes	:	+-	3.0
Check tolerance cm3/1000s. Spreed	:	+	6.0
Tolerance cm3/1000 strokes Check tolerance	:		6.0
cm3/1000s.	:		10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 19.01.95 : ISO 4113

Combination No. : 0402646994A

Injection pump

Pump designation : PE6P120A320LS7852

EP type number : 0412626871

Governor

Governer design. : RQ300/950PA1032-13

Governer no. : 0421801747

Cust. part No. : 0230744202

Customer-spec. information : MB-NFZ Customer : 0M441 LA Motor Power KW : 250.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413047

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 Tolerance bar : **←** 1.5

Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm Tolerance mm

test only : + 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

: 6-3-5-2-4-Firing order

: 1-

: 0-60-120-180-240 Phasing

: -300-360 : +- 0.30 Tolerance

Check

tolerance *NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rom : 550

Rack travel in mm: 15.10

Del. quantity cm3/1000 strokes : 252.0	Check tolerance : 9.0
Tolerance cm3/1000 strokes : + 1.0	- RATED SPEED
Check tolerance cm3/1000s. : + 4.0	- control lever - position degree : 100.0
Spreed Tolerance	tolerance degree : + 4.0
cm3/1000 strokes : 5.0	rack travel mm : 14.10 Rated speed rpm : 998
Check tolerance cm3/1000s. : 9.0	· Tolerance 1/min : +- 8 · rack travel mm : 4.00
2nd speed rpm : 300	rack travel mm : 4.00 Rated speed rpm : 1100 Tolerance 1/min : +- 15
Rack travel in mm: 6.20 Tolerance mm: + 0.30	rack travel mm : 0.75
Del. quantity cm3/1000 strokes : 19.0 Tolerance	Tolerance mm : + 0.75 Rated speed rpm : 1200
cm3/1000 strokes : +- 3.0 Check tolerance	LOW IDLE
cm3/1000s. : + 6.0 Spreed Tolerance	control lever
cm3/1000 strokes : 6.0 Check tolerance	position degree : 75.0 tolerance degree : +- 4.0
cm3/1000s. : 10.0	Testing:
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 300 rack travel mm : 5.50
	Tolerance mm : + 0.10
GUIDE SLEEVE POSITION	rack travel mm : 2.00 Rated speed rpm : 440
Ratted speed rpm : 600	Tolerance 1/min : +- 20 Rated speed rpm : 200
Rack travel in mm: 20.00 + Tolerance mm: + 0.80 +	CRT mm min. : > 8.80
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 550	Rated speed rpm : 550
Aneroid pressure hPa : 1100	rack travel mm : 15.10 Tolerance mm : + 0.05
Del. quantity cm3/1000 strokes : 252.0 Tolerance	Rated speed rpm : 950 rack travel mm : 15.10
cm3/1000 strokes : + 1.0 - Check tolerance	rack travel mm : 15.10 Tolerance mm : +- 0.10
cm3/1000s. : + 4.0 +	
Tolerance cm3/1000 strokes : 5.0	

		+ Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST		+ Del. quantity + cm3/1000 strokes : 135.0 + Tolerance
		+ cm3/1000 strokes : + 1.0
SETTING		+ Check tolerance + cm3/1000s. : + 4.0 + Spreed
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : 15.10	Tolerance cm3/1000 strokes : 8.0 check tolerance cm3/1000s. : 12.0
MEASUREMENT		BREAKAWAY
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 9.15	Rack travel in mm: 14.10 Rated speed rpm: 998
Rated speed rpm	: 400	+ Tolerance 1/min : +- 8
Pressure hPa rack travel mm Tolerance mm	: 10.05	STARTING FUEL DELIVERY
Pressure hPa rack travel mm Tolerance mm	: 13.85	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 235.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance
START CUT-OUT		cm3/1000s. : + 24.0
Rated speed rpm Check		‡
speed 1/min Rated speed rpm Check	: > 80 : < 220	LOW IDLE
speed 1/min	: < 240	Rated speed rpm : 300 cack travel mm : 6.20
FUEL DELIVERY CHA	ARACTERISTICS	+ Tolerance mm : + 0.30 - Del. quantity - cm3/1000 strokes : 19.0
Aneroid pressure	4400	+ Tolerance
hPa Rated speed rpm	: 1100 : 950	+ cm3/1000 strokes : + 3.0 + Check tolerance
Del. quantity cm3/1000 strokes	-	+ cm3/1000s. : ← 6.0 + Spreed
Tolerance cm3/1000 strokes	: ← 3.0	Tolerance cm3/1000 strokes : 6.0
Check tolerance cm3/1000s. Spreed	: +- 6.0	Check tolerance : 10.0
Tolerance cm3/1000 strokes	: 8.0	‡
Check tolerance cm3/1000s.	: 12.0	Ī
Aneroid pressure hPa	: ~	‡

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.10.94 : ISO 4113 Test oil

Combination No. : 0402648867

Injection pump

Pump designation : PE8P120A720/4LS7166

EP type number : 0412628897

Governor

Governer design. : RQ750PA758-7 Governer no. : 0421801490

Cust. part No. : 1305125

Customer-spec. information Customer : SCANIA : DS 14 Motor

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C : **←** 2.0

Overflow valve : 1417413025

Inlet press. bar: Tolerance bar : + 0.1

Test nazzle holde

: 1688901019 assembly

Opening pressure

bar Tolerance bar : **←** 1.5

Test lines : 1680750015

Outside diameter : 6.0 x inside diameter : x length mm :

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm 5.05 Tolerance mm : + 0.05

test only : **←** 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-2-7-3-4 :-5-6-8 Firing order

Phasing : 0-45-90-135-180 : -225-270-315

: + 0.30Tolerance

Check

tolerance °NW : **←** 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 12.55 Tolerance mm : \div 0.05

Del. quantity cm3/1000 strokes : 253.0	t
Tolerance cm3/1000 strokes : + 1.0	ANEROID/ALTITUDE COMPENSATOR TEST
Check tolerance	SETTING
cm3/1000s. : + 4.0	Rated speed rpm : 500 Pressure hPa : 900
Tolerance cm3/1000 strokes : 7.0	rack travel mm : 12.55 Tolerance mm : + 0.05
Check tolerance : 10.0	MEASUREMENT
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Pressure hPa : - Rated speed rpm : 500 rack travel mm : 9.90 Tolerance mm : + 0.20
	Rated speed rpm : 500
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	Pressure hPa : 365 rack travel mm : 11.85 Tolerance mm : + 0.05
Aneroid pressure hPa : 900 Del. quantity	Pressure hPa : 215 rack travel mm : 10.90
cm3/1000 strokes : 253.0	+ Tolerance mm : + 0.15
Tolerance	Toterance iiii . += 0.15
Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	FUEL DELIVERY CHARACTERISTICS
Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 7.0	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : -
Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity
Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : +- 2.0
Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 10.0 RATED SPEED	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 160.0 Tolerance
Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 10.0	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Aneroid pressure hPa : -
Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 10.0 RATED SPEED control lever position degree : 30.0 tolerance degree : + 4.0 control lever position degree : 89.0	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 16.0 Tolerance
Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 10.0 RATED SPEED control lever position degree : 30.0 tolerance degree : + 4.0 control lever	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 6.0
Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 10.0 RATED SPEED control lever position degree : 30.0 tolerance degree : + 4.0 control lever position degree : 89.0	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 16.12.94

Test oil

: ISO 4113

Combination No. : 0402648874

Injection pump

Pump designation: PE8P120A720LS7189

: -10

EP type number

: 0412628893

Governor

Governer design. : RQV200...950PA736-8

Governer no.

: 0421813815

Cust. part No. : 1303811

Customer-spec. information

Customer

: SCANIA

Motor

: DSC14 10

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

Overflow valve

: 1417413025

Inlet press. bar :

Tolerance bar

Test nozzle holde

assembly

: 1688901104

Opening pressure

251.5

Tolerance bar

Test Lines

: 1680750008

Outside diameter :

6.0

x inside diameter : 2.0 x length mm

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test præsure bar :

Tolerance bar : +-

Prestroke mm 5.05

Tolerance mm : **←** 0.05

test only : + 0.10

Rack travel in mm: 10.50 Tolerance mm

Firing order : 1-2-7-3-4

: - 5- 6- 8

: 0-45-90-135-180 Phasing

: -225-270-315 : + 0.30

Tolerance Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm :

700

Rack travel in mm: 13.05

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 238.0	Spreed Tolerance
Tolerance	cm3/1000 strokes : 8.0 Check tolerance
cm3/1000 strokes : + 1.0	cm3/1000s. : 12.0
Check tolerance cm3/1000s. : + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 8.0	control lever position degree : 60.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : 12.0	control lever position degree : 94.0
2nd speed rpm : 250	tolerance degree : +- 4.0
Rack travel in mm: 4.50 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 16.0	rack travel mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : +- 5
Tolerance + 3.0 Check tolerance +	rack travel mm : 4.00 Rated speed rpm : 1115 Tolerance 1/min : +- 15
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50
cm3/1000 strokes : 4.0 + Check tolerance +	Rated speed rpm : 1250
cm3/1000s. : 8.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 45.0
+	tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	control lever
‡	
GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1150	control lever position degree : 11.0
control lever position degree : -1 Rated speed rpm : 1150	control lever position degree : 11.0 tolerance degree : +- 4.0 Testing: Rated speed rpm : 250
control lever position degree : -1	control lever position degree : 11.0 tolerance degree : +- 4.0 Testing:
control lever position degree : -1 Rated speed rpm : 1150 Rack travel in mm : 9.50 Tolerance mm : + 2.50	control lever position degree : 11.0 tolerance degree : +- 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.50
control lever position degree : -1 Rated speed rpm : 1150 Rack travel in mm : 9.50 Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	control lever position degree : 11.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.50 Tolerance mm : + 0.10
control lever position degree : -1 Rated speed rpm : 1150 Rack travel in mm : 9.50 Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure	control lever position degree : 11.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.50 Tolerance mm : + 0.10 Rated speed rpm : 150
control lever position degree : -1 Rated speed rpm : 1150 Rack travel in mm : 9.50 Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 238.0	control lever position degree : 11.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.50 Tolerance mm : + 0.10 Rated speed rpm : 150 CRT mm min. : > 5.80
control lever position degree : -1 Rated speed rpm : 1150 Rack travel in mm : 9.50 Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity	control lever position degree : 11.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.50 Tolerance mm : + 0.10 Rated speed rpm : 150 CRT mm min. : > 5.80 CONTINUOUS-ACTION CONTROL

B03

Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.05 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 950 : 13.05 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 13.05 : ← 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 10.00 : + 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 525 : 11.75 : + 0.05
Pressure hPa rack travel mm Tolerance mm	: 320 : 10.50 : + 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 144.0 : + 1.0

: +- 4.0

BREAKAWAY

Rack travel in mm : 12.00
Rated speed rpm : 995
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.00 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm	:		250
rack travel mm	:		4.50
Tolerance mm	:	+-	0.30
Del. quantity			
cm3/1000 strokes	:		16.0
Tolerance			
cm3/1000 strokes	:	+-	3.0
Check tolerance			
cm3/1000s.	:	+-	6.0
Spreed			
Tolerance			
cm3/1000 strokes	:		4.0
Check tolerance			
cm3/1000s.	:		8.0

cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 Test oil : ISO 4113

Combination No. : 0402648896

Injection pump

Pump designation : PE8P120A720LS7189

: -10Q

EP type number : 0412628894

Governor

Governer design. : RQV200...950PA736-9

Governer no. : 0421814050

Cust. part No. : 1320645

Customer—spec. information Customer : SCANIA Motor : DSC14 08

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Tolerance l/h: \leftarrow 10.0

Test nozzle holde

assembly : 1688901104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test Lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50Tolerance mm : + 1.50

Firing order : 1-2-7-3-4 :-5-6-8

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance $\div 0.30$

Check

tolerance "NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 2

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.35 Tolerance mm : + 0.05

Del. quantity + Spreed + Tolerance	
+ cm3/1000 strokes : 8.0	ł
Tolerance Check tolerance cm3/1000s : 12.0	i
Check tolerance cm3/1000s. : + 4.0 RATED SPEED	
Spreed Tolerance control lever cm3/1000 strokes: 8.0 position degree : 60.0 tolerance degree : + 4.0	
Check tolerance + control lever	
2nd speed rpm : 150	
Rack travel in mm: 4.50	
Tolerance + rack travel mm : 4.00 cm3/1000 strokes : + 3.0 + Rated speed rpm : 1105 check tolerance + Tolerance 1/min : + 15	
cm3/1000s. : + 6.0 + spreed + rack travel mm : 0.50 Tolerance + Tolerance mm : + 0.50	
cm3/1000 strokes : 4.0 + Rated speed rpm : 1250 + Check tolerance	
cm3/1000s. : 8.0 +	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR control lever position degree : 46.0 tolerance degree : + 4.0	
GUIDE SLEEVE POSITION control lever position degree : 11.0 tolerance degree : + 4.0	
control lever position degree : -1	
Rack travel in mm: 9.50	
T	
FILL LOAD DELIVERY AT FILL LOAD STOP Rated speed rpm : 150	
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 CRT mm min. : > 5.80	
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - CONTINUOUS-ACTION CONTROL	
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure CRT mm min. : > 5.80	

Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.35 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 950 : 12.35 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.35 : +- 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	500 9.70 + 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 525 : 11.75 : + 0.05
Pressure hPa rack travel mm Tolerance mm	: 320 : 10.50 : ← 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	: – : 950
Rated speed rpm Del. quantity	
cm3/1000 strokes Tolerance	: 206.0
cm3/1000 strokes Check tolerance cm3/1000s.	: +- 4.0 : +- 6.0
Aneroid pressure	0.0
hPa Rated speed nom	: : 500
Del. quantity cm3/1000 strokes	: 134.0
Tolerance cm3/1000 strokes	: + 2.0
Chack talenance	

: ← 4.0

BREAKAWAY

Rack travel in mm : 11.30
Rated speed rpm : 995
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 9.70 Tolerance mm : + 0.20 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm : 150 4.50 rack travel mm Tolerance mm : **←** 0.30 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0

Check tolerance cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 16.12.94 : ISO 4113

Combination No. : 0402648897

Injection pump

Pump designation : PE8P12OA72OLS7189

: -10

EP type number : 0412628897

Governor

Governer design. : RQV200...950PA736-9

Governer no. : 0421814050

Cust. part No. : 1320643

Customer-spec. information : SCANIA Customer : DSC14 10 Motor

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar

Tolerance L/h : **←** 10.0

Test nozzle holde

: 1688901104 assembly

Opening pressure

bar Tolerance bar

Test lines : 1680750008 Outside diameter : 6.0

x inside diameter :

2.0

x length mm :

600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : \leftarrow 1.0

Prestroke mm 5.05 Tolerance mm

test only : **←** 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-2-7-3-4 :-5-6-8 Firing order

Phasing : 0-45-90-135-180 : -225-270-315

: ← 0.30 Tolerance

Check

tolerance "NW : **←** 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

700 Rated speed rpm :

Rack travel in mm: 13.05 : +- 0.05 Tolerance mm

Del. quantity cm3/1000 strokes : 238.0	Spreed Tolerance cm3/1000 strokes : 8.0
Tolerance cm3/1000 strokes : + 1.0	Check tolerance cm3/1000S. : 12.0
Check tolerance cm3/1000s. : + 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 8.0	control lever position degree : 60.0 tolerance degree : 4.0
Check tolerance : 12.0	control lever position degree : 94.0
2nd speed rpm : 250	tolerance degree : + 4.0
Rack travel in mm: 4.50 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 16.0	rack travel mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5
Tolerance cm3/1000 strokes : + 3.0 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1115 Tolerance 1/min : +- 15
cm3/1000s. : + 6.0 Spreed Tolerance	rack travel mm : 0.50 Tolerance mm : +- 0.50
cm3/1000 strokes : 4.0 + Check tolerance +	Tolerance mm : +- 0.50 Rated speed rpm : 1250
cm3/1000s. : 8.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 46.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	control lever position degree : 11.0 tolerance degree : +- 4.0
control lever position degree : -1 Rated speed rpm : 1120	Testing:
Rack travel in mm: 9.50 Tolerance mm: + 2.50	Rated speed rpm : 250 rack travel mm : 4.50 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 150
Rated speed rpm : 700	CRT mm min. : > 5.80
Aneroid pressure hPa : -	CONTINUOUS-ACTION CONTROL
Del. quantity cm3/1000 strokes : 238.0	Rated speed rpm : 300
cm3/1000 strokes : +- 1.0 +- Check tolerance cm3/1000s. : +- 4.0 +-	TORQUE CONTROL

Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.05 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 950 : 13.05 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 13.05 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	500 9.70 + 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 525 : 11.75 : + 0.05
Pressure hPa rack travel mm Tolerance mm	: 320 : 10.50 : +- 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	: -
Rated speed rpm Del. quantity	: 950
cm3/1000 strokes Tolerance	: 224.0
cm3/1000 strokes Check tolerance	: +- 4.0
cm3/1000s.	: ← 6.0
Aneroid pressure	: -
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes Tolerance cm3/1000 strokes	: 134.0 : ← 1.0
Check tolerance cm3/1000s.	: ← 1.0 : ← 4.0
	7.5

BREAKAWAY

Rack travel in mm: 12.00 Rated speed rpm : 5 Tolerance 1/min : +-

STARTING FUEL DELIVERY

100 Rated speed rpm 9.70 rack travel mm Tolerance mm : **←** 0.20 Tolerance cm3/1000 strokes : \leftarrow 20.0 Check tolerance cm3/1000s. : **←** 24.0

LOW IDLE

cm3/1000s.

Rated speed rpm 250 4.50 rack travel mm Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance

8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 Test oil : ISO 4113

Combination No. : 0402648943

Injection pump

Pump designation : PE8P120A720LS7189

: -10

EP type number : 0412628893

Governor

Governer design. : RQV350...1050PA795

: -14

Governer no. : 0421814020

Cust. part No. : 1340518

Customer—spec. information Customer : SCANIA Motor : DSC14

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 1417413025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.05
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-2-7-3-4 :-5-6-8

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : \leftarrow 0.30

Check

tolerance °NW : \leftarrow 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.25 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 216.0	Spreed Tolerance cm3/1000 strokes : 8.0
Tolerance cm3/1000 strokes : +- 1.0	Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : +- 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 8.0	control lever position degree : 46.0
Check tolerance cm3/1000s. : 12.0	control lever position degree : 106.0 tolerance degree : +- 4.0
2nd speed rpm : 350	rack travel mm : 11.20
Rack travel in mm: 4.60 Tolerance mm: + 0.30 Del. quantity	Rated speed rpm : 1095 Tolerance 1/min : + 5
cm3/1000 strokes : 21.0 + Tolerance + 3.0 + -	rack travel mm : 4.00 Rated speed rpm : 1195 Tolerance 1/min : +- 15
Check tolerance	
cm3/1000s. : +- 6.0 +- Spreed +- Tolerance +-	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350
cm3/1000 strokes : 4.0 - Check tolerance	
cm3/1000s. : 8.0	LOW IDLE
	control lever position degree : 74.0 tolerance degree : + 4.0
cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP	control lever position degree : 74.0
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION	control lever position degree : 74.0 tolerance degree : + 4.0 control lever
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1150	control lever position degree : 74.0 tolerance degree : + 4.0 control lever position degree : 15.0
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1	control lever position degree : 74.0 tolerance degree : + 4.0 control lever position degree : 15.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1150 Rack travel in mm : 16.50	control lever position degree : 74.0 tolerance degree : + 4.0 control lever position degree : 15.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1150 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	control lever position degree : 74.0 tolerance degree : + 4.0 control lever position degree : 15.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 250
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1150 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity	control lever position degree : 74.0 tolerance degree : + 4.0 control lever position degree : 15.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 250 CRT mm min. : > 7.50
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1150 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : -	control lever position degree : 74.0 tolerance degree : + 4.0 control lever position degree : 15.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 250 CRT mm min. : > 7.50

: + 0.05Tolerance mm Rated speed rpm 1050 rack travel mm 12.25 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rom 500 Pressure hPa 1500 12.25 rack travel mm Tolerance mm 0.05 MEASUREMENT Pressure hPa 500 Rated speed rpm 10.00 rack travel mm Tolerance mm. 0.20 500 Rated speed rpm Pressure hPa 525 rack travel mm 11.75 Tolerance mm : + 0.05Pressure hPa 320 10.50 rack travel mm Tolerance mm : +- 0.20 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm 1050 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes 4.0 Check tolerance cm3/1000s. 6.0 Aneroid pressure 500 Rated speed rpm Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes 1.0 : +-

4.0

BREAKAWAY

Rack travel in mm : 11.20
Rated speed rpm : 1095
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 10.00
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 160.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 24.0

LOW IDLE

350 Rated speed rpm rack travel mm 4.60 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 21.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0

Check tolerance cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 25.08.94 : ISO 4113

Combination No. : 0402648944

Injection pump

Pump designation : PE8P120A920/4LS7266

EP type number

: 0412628898

Governor

Governer design. : RQ750PA758-15

Governer no.

: 0421801660

Cust. part No. : 1340528

Customer-spec. information Customer : SCANIA

Motor

: DS 14

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

: + 2.0

Overflow valve

: 1417413025

Inlet press. bar :

2.5

Test nozzle holde

assembly

: 1688901104

Opening pressure

bar

251.5

Tolerance bar

Test lines

: 1680750008

Outside diameter :

6.0

x inside diameter:

2.0

x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm

5.05

Tolerance mm

: +- 0.05

: + - 0.10

test only

Rack travel in mm: 10.50

Tolerance mm

Firing order

: 1-2-7-3-4 :-5-6-8

Phasing

: 0-45-90-135-180 : -225-270-315

Tolerance

: +- 0.30

Check

tolerance °NW

: + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm :

700

Rack travel in mm: Tolerance mm

: +- 0.05

Del. quantity

cm3/1000 strokes :

287.0

14.95

Tolerance cm3/1000 strokes : + 1.0	Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : +- 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 8.0	control lever position degree : 36.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 12.0	control lever position degree : 88.0 tolerance degree : + 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Total and degree
CITE SIFE TRANS	TORQUE CONTROL
GUIDE SLEEVE TRAVEL	Rated speed rpm : 700_
Rated speed rpm : 759 guide sleeve travel mm : 6.36	Rated speed rpm : 700 rack travel mm : 14.95 Tolerance mm : +- 0.05
Tolerance mm : + 0.25	ANEROID/ALTITUDE
Rated speed rpm : 520	COMPENSATOR TEST
guide steeve travel mm : -5.69 Tolerance mm : + 0.25	SETTING
Rated speed rpm : 850 guide sleeve travel mm : 16.58	Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 14.95
travel mm : 16.58 Tolerance mm : + 0.25	rack travel mm : 14.95 Tolerance mm : +- 0.05
Rated speed rpm : 798 guide sleeve	MEASUREMENT
travel mm : 10.00 + Tolerance mm : + 0.25	Pressure hPa : - Rated speed rpm : 500
Rated speed rpm : 860 guide sleeve	rack travel mm : 11.00 Tolerance mm : +- 0.20
travel mm : 11.50 + Tolerance mm : + 0.50 +	Rated speed rpm : 500
 ‡	Pressure hPa : 670 rack travel mm : 13.45
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : ← 0.05
Rated speed rpm : 700 Aneroid pressure	Pressure hPa : 450 rack travel mm : 12.20
hPa : - + Del. quantity +	Tolerance mm : + 0.20
cm3/1000 strokes : 287.0	
cm3/1000 strokes : + 1.0 Check tolerance	FUEL DELIVERY CHARACTERISTICS
cm3/1000S. : +- 4.0 +-	Aneroid pressure hPa : -
Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 500

Del. quantity cm3/1000 strokes : 177.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s.4.0 Aneroid pressure hPa Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : +--4.0 Check tolerance cm3/1000s. 6.0 Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 9.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 11.00 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 130.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 : ISO 4113 Test oil

Combination No. : 0402648959

Injection pump

Pump designation : PE8P120A720LS7189

EP type number : 0412628893

Governor

Governer design. : RQV350...1100PA795

: -15

Governer no. : 0421814048

Cust. part No. : 1340524

Customer-spec. information Customer : SCANIA Motor : DSI1453A

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar 0.1

Tolerance L/h : +- 10.0

Test nozzle holde

assembly : 1688901104

Opening pressure

bar 251.5 : + 1.5 Tolerance bar

Test lines : 1680750008 Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : \leftarrow 1.0

5.05 Prestroke mm : +- 0.05 Tolerance mm

test only : **←** 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-2-7-3-4 :-5-6-8 Firing order

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : +- 0.30 Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm 700

Rack travel in mm: 13.45 : + 0.05 Tolerance mm

Del. quantity +	- Spreed
cm3/1000 strokes : 248.0	- Tolerance
	- cm3/1000 strokes : 8.0
Tolerance	- Check tolerance
cm3/1000 strokes : +- 1.0	- cm3/1000s. : 12.0
Tiby tood set ones . The Tib	- 12.0
Check tolerance	
cm3/1000s. : +- 4.0	DATES COULS
tm5/10005. : ← 4.0 †	- RATED SPEED
	•
Spreed	•
Tolerance	- control lever
cm3/1000 strokes : 8.0	- position degree : 47.0
	- tolerance degree : +- 4.0
Check tolerance	•
cm3/1000s. : 12.0	- control lever
4	- position degree : 105.0
2nd speed rpm : 350 +	- tolerance degree : + 4.0
1	•
Rack travel in mm: 4.60	rack travel mm : 12.40
Tolerance mm : +- 0.30	Rated speed rpm : 1145
Del. quantity	Tolerance 1/min : + 5
cm3/1000 strokes : 21.0	Total drice Militing 1
Tolerance	nock tonical man a // 00
cm3/1000 strokes : + 3.0	rack travel mm : 4.00
	Rated speed rpm : 1275
Check tolerance	Tolerance 1/min : + 15
cm3/1000s. : + 6.0	
Spreed	rack travel mm : 0.50 Tolerance mm : + 0.50
Tolerance	
cm3/1000 strokes : 4.0	- Rated speed rpm : 1400
Check tolerance	•
$cm3/1000s$. : 8.0 \pm	
cm3/1000s. : 8.0 $+$	
Cm5/10005. : 8.0	LOW IDLE
CIIS/1000S. : 8.0	LOW IDLE
‡	LOW IDLE
(B) SETTING OF INJECTION PUMP	•
‡	· control lever
(B) SETTING OF INJECTION PUMP	control lever 73.0
(B) SETTING OF INJECTION PUMP	· control lever
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 73.0 tolerance degree : + 4.0
(B) SETTING OF INJECTION PUMP	control lever position degree : 73.0 tolerance degree : + 4.0 control lever
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION	control lever position degree : 73.0 tolerance degree : + 4.0 control lever
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing:
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 1 Rated speed rpm : 1250	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 1 Rated speed rpm : 1250 Rack travel in mm : 10.50	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 1 Rated speed rpm : 1250	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 1 Rated speed rpm : 1250 Rack travel in mm : 10.50	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 1 Rated speed rpm : 1250 Rack travel in mm : 10.50 Tolerance mm : + 2.50	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 1 Rated speed rpm : 1250 Rack travel in mm : 10.50	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 250
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 1 Rated speed rpm : 1250 Rack travel in mm : 10.50 Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1250 Rack travel in mm : 10.50 Tolerance mm : +- 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 250
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 1 Rated speed rpm : 1250 Rack travel in mm : 10.50 Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 250
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1250 Rack travel in mm : 10.50 Tolerance mm : +- 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 250
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1250 Rack travel in mm : 10.50 Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : -	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 250 CRT mm min. : > 7.70
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1250 Rack travel in mm : 10.50 Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 250 CRT mm min. : > 7.70
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1250 Rack travel in mm : 10.50 Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 248.0	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 250 CRT mm min. : > 7.70
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 1 Rated speed rpm : 1250 Rack travel in mm : 10.50 Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 248.0 Tolerance	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 250 CRT mm min. : > 7.70
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -1 Rated speed rpm : 1250 Rack travel in mm : 10.50 Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 248.0 Tolerance cm3/1000 strokes : + 1.0	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 250 CRT mm min. : > 7.70 CONTINUOUS-ACTION CONTROL Rated speed rpm : 325
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 1 Rated speed rpm : 1250 Rack travel in mm : 10.50 Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 248.0 Tolerance	control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 15.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 250 CRT mm min. : > 7.70

Rated speed rpm 700 13.45 rack travel mm Tolerance mm : **←** 0.05 Rated speed rpm 1100 13.45 rack travel mm : +- 0.05 Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 Pressure hPa 1500 13.45 rack travel mm Tolerance mm : + 0.05 MEASUREMENT Pressure hPa Rated speed rpm 500 10.40 rack travel mm Tolerance mm 0.20 Rated speed rom 500 1100 Pressure hPa 12.75 rack travel mm Tolerance mm : **←** 0.05 740 Pressure hPa 11.30 rack travel mm Tolerance mm : + 0.20FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1100 Rated speed rpm Del. quantity cm3/1000 strokes : 223.0 Tolerance cm3/1000 strokes 4.0 Check tolerance cm3/1000s. 6.0 Aneroid pressure Rated speed rpm 500 Del. quantity cm3/1000 strokes : 160.0

BREAKAWAY

Rack travel in mm : 12.40
Rated speed rpm : 1145
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.40 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1900 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm 350 4.60 rack travel mm Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 21.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes 4.0 Check tolerance cm3/1000s. 8.0

Tolerance

cm3/1000 strokes

Check tolerance cm3/1000s.

1.0

4.0

: +-

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.01.95 Test oil : ISO 4113

Combination No. : 0402648982

Injection pump

Pump designation : PE8P120A320LS7884

EP type number : 0412628900

Governor

Governer design. : RQV350...1200PA1197

Governer no. : 0421814116

Cust. part No. : 0250744102

Customer-spec. information

Customer : MTU

: 8V-183-03 Motor Power KW : 564.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar : +-1.5

Overflow quantity

min. L/h : 120
Tolerance L/h : + 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

bar Tolerance bar : +- 1.5

Lube oil : 1409918004

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter :

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

rest pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.05 Tolerance mm : + 0.05

test only : **←** 0.10

Rack travel in mm : 20.50Tolerance mm : $\leftarrow 0.50$

: 8-7-2-6-3 :-5-4-1 Firing order

Phasing : 0-45-90-135-180

: -225-270-315 : + 0.30Tolerance

Check

tolerance $^{\circ}NW$: + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 9.50

B20

Tolomoro 1 0.05	
Tolerance mm : + 0.05	Rated speed rpm : 457
Del. quantity + cm3/1000 strokes : 260.5 +	guide sleeve travel mm : 3.13
Tolerance	Tolerance mm : + 0.25
cm3/1000 strokes : +- 1.0	Rated speed rpm : 610 guide sleeve
Check tolerance cm3/1000s. : +- 4.0	travel mm : 3.65 Tolerance mm : +- 0.25
Spreed	Rated speed rpm : 1360
Tolerance + cm3/1000 strokes : 5.0 +	guide sleeve travel mm : 10.00
+	Tolerance mm : + 0.25
Check tolerance : 9.0	Rated speed rpm : 1470
2nd speed rpm : 350	guide sleeve travel mm : 11.50
Rack travel in mm: 3.80	Tolerance mm : ← 0.50
Tolerance mm : + 0.30 + Del. quantity +	GUIDE SLEEVE POSITION
cm3/1000 strokes : 15.0 +	SOIDE SLEEVE POSITION
Tolerance + 3.0 +	control lever
Check tolerance $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$	position degree : - 1 Rated speed rpm : 1320
Spreed + Tolerance +	Rack travel in mm : 13.00
cm3/1000 strokes : 8.0	Tolerance mm : + 1.30
	Tolerance mm : +- 1.30
cm3/1000 strokes : 8.0 + Check tolerance	
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 650
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 650 Del. quantity cm3/1000 strokes : 260.5
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 650 Del. quantity cm3/1000 strokes : 260.5 Tolerance
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 quide sleeve	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 650 Del. quantity cm3/1000 strokes : 260.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 650 Del. quantity cm3/1000 strokes : 260.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.20	Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 650 Del. quantity cm3/1000 strokes : 260.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.20 Rated speed rpm : 1255	Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 650 Del. quantity cm3/1000 strokes : 260.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
Cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 350 guide sleeve travel mm: 1.53 Tolerance mm: + 0.20 Rated speed rpm: 1255 guide sleeve travel mm: 8.31	Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 650 Del. quantity cm3/1000 strokes : 260.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.20 Rated speed rpm : 1255 guide sleeve	Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 650 Del. quantity cm3/1000 strokes : 260.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 350 guide sleeve travel mm: 1.53 Tolerance mm: + 0.20 Rated speed rpm: 1255 guide sleeve travel mm: 8.31 Tolerance mm: + 0.15 Rated speed rpm: 1000	Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 650 Del. quantity cm3/1000 strokes : 260.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 350 guide sleeve travel mm: 1.53 Tolerance mm: + 0.20 Rated speed rpm: 1255 guide sleeve travel mm: 8.31 Tolerance mm: + 0.15 Rated speed rpm: 1000 guide sleeve travel mm: 5.83	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 650 Del. quantity cm3/1000 strokes : 260.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED
Cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 350 guide sleeve travel mm: 1.53 Tolerance mm: + 0.20 Rated speed rpm: 1255 guide sleeve travel mm: 8.31 Tolerance mm: + 0.15 Rated speed rpm: 1000 guide sleeve	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 650 Del. quantity cm3/1000 strokes : 260.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED
Cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.20 Rated speed rpm : 8.31 Tolerance mm : + 0.15 Rated speed rpm : 1000 guide sleeve travel mm : 5.83 Tolerance mm : + 0.25 Rated speed rpm : 5.83 Tolerance mm : + 0.25	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 650 Del. quantity cm3/1000 strokes : 260.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED
Cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.20 Rated speed rpm : 1255 guide sleeve travel mm : 8.31 Tolerance mm : + 0.15 Rated speed rpm : 1000 guide sleeve travel mm : 5.83 Tolerance mm : 5.83 Tolerance mm : + 0.25	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 650 Del. quantity cm3/1000 strokes : 260.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED control lever position degree : 120.0

Tolerance 1/min	: +- 5	4
		Pressure hPa : 500
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00	rack travel mm : 7.20 Tolerance mm : + 0.05
Tolerance 1/min	: 1343 · +- 15	Tolerance mm : +- 0.05
Total dide 1711/11		Pressure hPa : 250
rack tra el mm	: 0.50	+ rack travel mm : 9.00
Tolerance mm	: + 0.50	Tolerance mm : + 0.10
Rated speed rpm	: 1450	Pressure hPa : 1600
		rack travel mm : 13.00
LOW IULE		Pressure hPa : 1600 - rack travel mm : 13.00 - Tolerance mm : + 0.05
		+
control lever		Pressure hPa : 1000 rack travel mm : 10.60
position degree	: 64.0	Tolerance mm : +- 0.10
tolerance degree		+
Tankina.		CTART CUT OUT
Testing:		START CUT-OUT
Rated speed rpm	: 350	Rated speed rpm : > 100
rack travel mm	: 3.80	+ Check
Tolerance mm	: ← 0.10	speed 1/min :> 80 Rated speed rpm : < 270
Rated speed rpm	• 250	+ Rated speed rpm : < 270 + Check
Nated Speed I pill	. 20	speed 1/min : < 290
CRT mm min.	: > 5.30	+
		FILE OF THEOV CHARACTERISTICS
CONTINUOUS-ACTION	CONTROL	FUEL DELIVERY CHARACTERISTICS
00/11/2/0000 /(0/20/1	001111102	
		+ Aneroid pressure
Rated speed rpm	: 450	+ Aneroid pressure + hPa : 2000
Rated speed rpm	: 450	+ hPa : 2000 + Rated speed rpm : 1200
	: 450	+ hPa : 2000 + Rated speed rpm : 1200
Rated speed rpm TORQUE CONTROL		hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0
TORQUE CONTROL Rated speed rpm	: 600	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : +- 1.5
TORQUE CONTROL Rated speed rpm rack travel mm	: 600 : 9.50	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance
TORQUE CONTROL Rated speed rpm	: 600 : 9.50	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.5
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 600 : 9.50 : + 0.05	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm	: 600 : 9.50 : ← 0.05 : 1200 : 14.00	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 8.0
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 600 : 9.50 : ← 0.05	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000S. : + 4.5 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 600 : 9.50 : ← 0.05 : 1200 : 14.00 : ← 0.10	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 8.0
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm	: 600 : 9.50 : + 0.05 : 1200 : 14.00 : + 0.10 : 750 : 14.00	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 600 : 9.50 : + 0.05 : 1200 : 14.00 : + 0.10 : 750 : 14.00	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : 2000
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm	: 600 : 9.50 : + 0.05 : 1200 : 14.00 : + 0.10 : 750 : 14.00	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : 2000 Rated speed rpm : 750
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 600 : 9.50 : + 0.05 : 1200 : 14.00 : + 0.10 : 750 : 14.00	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : 2000 Rated speed rpm : 750 Del. quantity
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm	: 600 : 9.50 : + 0.05 : 1200 : 14.00 : + 0.10 : 750 : 14.00	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : +- 1.5 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : 2000 Rated speed rpm : 750
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 600 : 9.50 : + 0.05 : 1200 : 14.00 : + 0.10 : 750 : 14.00	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : 2000 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 380.0 Tolerance cm3/1000 strokes : + 3.0
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 600 : 9.50 : + 0.05 : 1200 : 14.00 : + 0.10 : 750 : 14.00	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : 2000 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 380.0 Tolerance cm3/1000 strokes : 4.5 Check tolerance cm3/1000 strokes : 380.0 Tolerance cm3/1000 strokes : 4.5
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST	: 600 : 9.50 : + 0.05 : 1200 : 14.00 : + 0.10 : 750 : 14.00	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000strokes : + 1.5 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : 2000 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 380.0 Tolerance cm3/1000 strokes : + 3.0
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 600 : 9.50 : + 0.05 : 1200 : 14.00 : + 0.10 : 750 : 14.00	hPa : 2000 Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 334.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : 2000 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 380.0 Tolerance cm3/1000 strokes : 4.5 Check tolerance cm3/1000 strokes : 380.0 Tolerance cm3/1000 strokes : 4.5
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST MEASUREMENT Pressure hPa	: 600 : 9.50 : + 0.05 : 1200 : 14.00 : + 0.10 : 750 : 14.00 : + 0.10	hPa
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST MEASUREMENT Pressure hPa Rated speed rpm	: 600 : 9.50 : + 0.05 : 1200 : 14.00 : + 0.10 : 750 : 14.00 : + 0.10	hPa
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST MEASUREMENT Pressure hPa	: 600 : 9.50 : + 0.05 : 1200 : 14.00 : + 0.10 : 750 : 14.00 : + 0.10	hPa

Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 BREAKAWAY Rack travel in mm : 13.00 Rated speed rpm : 1245 Tolerance 1/min STARTING FUEL DELIVERY Rated speed rpm 100 Del. quantity cm3/1000 strokes : 370.0 Tolerance cm3/1000 strokes : \leftarrow 15.0 Check tolerance cm3/1000s. : + 19.0LOW IDLE 350 Rated speed rpm 3.80 rack travel mm 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 15.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 04.07.94 : ISO 4113

Combination No. : 0402676809

Injection pump

Pump designation : PE6P120A720RS7126

: -10

EP type number

: 0412626929

Governor

Governer design. : RSV350...1050P1A543

: -1

Governer no.

: 0421833325

Cust. part No. : 1305082

Customer-spec. information

Customer : SCANIA

: DS11 54,57 Motor

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1688901019

Opening pressure

bar

Tolerance bar

: +- 1.5

Test Lines : 1680750015

Outside diameter :

6.0

x inside diameter : 1.5 ണ x length mm :

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 5.05 Tolerance mm : +- 0.05

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 2

BASIC SETTING

Rated speed rpm :

700

Rack travel in mm: 14.15 : +- 0.05

Tolerance mm

Del. quantity +	Tolerance
cm3/1000 strokes : 235.0 +	cm3/1000 strokes : +- 1.0
Tolerance +	Check tolerance cm3/1000s. : +- 4.0
cm3/1000 strokes : +- 1.0	cm3/1000s. : +- 4.0 Spreed
The result of the second of th	Tolerance
Check tolerance	cm3/1000 strokes : 6.0
cm $3/1000$ s. : +- 4.0	Check tolerance
	cm3/1000s. : 9.0
Spreed +	
cm3/1000 strokes : 6.0	RATED SPEED
July 1888 Sel okes .	Will of the
Check tolerance	
cm3/1000s. : 9.0 +	control lever
2nd speed rpm : 350	position degree : 62.0
2nd speed rpm : 350	tolerance degree : +- 4.0
Rack travel in mm: 4.40	control lever
Tolerance mm : +- 0.30 +	position degree : 112.0
Del. quantity	tolerance degree : +- 4.0
cm3/1000 strokes : 17.0 + Tolerance +	rack travel mm : 13.10
cm3/1000 strokes : + 2.0 +	Rated speed rpm : 1095
Check tolerance	Tolerance 1/min : + 5
$cm3/1000s$. : \leftarrow 4.0	
Spreed +	rack travel mm : 4.00 Rated speed rpm : 1180 Tolerance 1/min : +- 15
Tolerance +	Rated speed rpm : 1180
cm3/1000 strokes : 3.0 + Check tolerance	Tolerance 1/min : +- 15
cm3/1000s. : 6.0	rack travel mm : 0.85
1	Tolerance mm : +- 0.55
+	Rated speed rpm : 1300
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	LOW IDLE
Ţ	FOM INFE
GUIDE SLEEVE POSITION +	control lever
†	position degree : 78.0
control lever	tolerance degree : +- 4.0
position degree : -3	control lever
Rated speed rpm : 800 +	position degree : 28.0
Paralla Association and Company	tolerance degree : +- 4.0
Rack travel in mm: 0.50 + Tolerance mm: + 0.20 +	Sotting point Worth human engine
Toterance min . The U.20	Setting point w/out bumper spring
governor spring	Rated speed rpm : 350
pre-tension +	rack travel mm : 3.90
click setting $x : 5.50 +$	· ·
<u></u> †	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 350
The sold personal line sold sold	rack travel mm : 4.40
Rated speed rpm : 700	Tolerance mm : +- 0.10
Aneroid pressure +	
hPa : 900 +	
No. 1 m. markata.	rack travel mm : 2.00
Del. quantity + cm3/1000 strokes : 235.0 +	rack travel mm : 2.00 Rated speed rpm : 460 Tolerance 1/min : +- 30

Rated speed rpm 100 : > 19.50 CRT mm min. TORQUE CONTROL Rated speed rpm 700 14.15 rack travel mm Tolerance mm : + 0.051000 Rated speed rpm rack travel mm 14.15 Tolerance mm : + 0.05ANEROID/ALTITUDE COMPENSATOR TEST SETTING 500 Rated speed rpm 900 Pressure hPa 14.15 rack travel mm : + 0.05Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm 500 : rack travel mm 10.70 : +- 0.20 Tolerance mm Rated speed rpm 500 510 Pressure hPa 13.05 rack travel mm : +- 0.05 Toterance mm 250 Pressure hPa rack travel mm 11.60 : + 0.20Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure 900 hPa 1000 Rated speed rpm Del. quantity cm3/1000 strokes : 227.0 Tolerance cm3/1000 strokes : +-4.0 Check tolerance cm3/1000s. : +-6.0

500 Rated speed rpm Del. quantity cm3/1000 strokes : 152.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.0 **BREAKAWAY** 13.10 Rack travel in mm : Rated speed rpm : Tolerance 1/min : +-STARTING FUEL DELIVERY 100 Rated speed rpm 20.50 rack travel mm : +- 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 300.0 Tolerance cm3/1000 strokes : \leftarrow 20.0 Check tolerance cm3/1000s. : + 24.0LOW IDLE 350 Rated speed rpm 4.40 rack travel mm 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. 6.0

Aneroid pressure

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 04.07.94 : ISO 4113

Combination No. : 0402676813

Injection pump

Pump designation : PE6P120A720RS7188

: -10

EP type number : 0412626924

Governor

Governer design. : RSV350...1050P1A543

: -2

Governer no.

: 0421833385

Cust. part No. : 1337551

Customer-spec. information

Customer : SCANIA

Motor

: DS11 ALLVARV

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar : +-

Test nozzle holde

assembly

: 1688901104

Opening pressure

bar

251.5

Tolerance bar

: + 1.5

Lube oil

: 1409918004

Test lines

: 1680750008

REMARKS

Outside diameter :

x inside diameter :

x length mm :

Check and set without ROBO diaphragam

6.0

2.0 600

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : +- 1.0

Prestroke mm 4.45 : **←** 0.05 Tolerance mm

: + 0.10test only

Rack travel in mm : 10.50 Tolerance mm : + 1.50 Tolerance mm

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: ← 0.30 Tolerance

Check

: +- 0.75 tolerance °NW

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm :

700

Rack travel in mm: 13.35

Tolerance mm : \leftarrow 0.05

B27

	Del. quantity
Del. quantity cm3/1000 strokes : 236.0	cm3/1000 strokes : 236.0 Tolerance
Tolerance	cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes : + 1.0	cm3/1000s. : +- 4.0 Spreed
Check tolerance cm3/1000s. : + 4.0	Tolerance cm3/1000 strokes : 8.0
Consol	Check tolerance
Spreed Tolerance cm3/1000 strokes : 8.0	cm3/1000s. : 12.0 RATED SPEED
Check tolerance cm3/1000s. : 12.0	NATED STEED
+	control lever
2nd speed rpm : 350	position degree : 59.0 tolerance degree : + 4.0
Rack travel in mm: 4.70	
Tolerance mm : + 0.30 + Del. quantity	control lever position degree : 109.0
cm3/1000 strokes : 19.0	tolerance degree : + 4.0
cm3/1000 strokes : + 3.0 Check tolerance	rack travel mm : 12.30
cm3/1000s. : + 6.0	Rated speed rpm : 1095 Tolerance 1/min : +- 5
Spreed	Total and Trimit
Tolerance	rack travel mm : 4.00
cm3/1000 strokes : 4.0	Rated speed rpm : 1150
Check tolerance + cm3/1000s. : 8.0	Tolerance 1/min : + 15
. 0.0	rack travel mm : 0.85
+	Tolerance mm : +- 0.55
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1300
WITH GOVERNOR	
	LOW IDLE
GUIDE SLEEVE POSITION	
+	control lever
+	position degree : 76.0
control lever position degree : -3	tolerance degree : +- 4.0
Rated speed rpm : 800	control lever
Traced opeca (print)	position degree : 25.0
Rack travel in mm: 0.50	tolerance degree : + 4.0
Tolerance mm : + 0.20	
governor spring	Setting point w/out bumper spring
pre-tension +	Rated speed rpm : 350
click setting x : 4.00	rack travel mm : 4.20
	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	
+	Rated speed rpm : 350
Rated speed rpm : 700	rack travel mm : 4.70
Aneroid pressure	Tolerance mm : + 0.10
· I	rack travel mm : 2.00

Rated speed rpm Tolerance 1/min	: 460 :
Rated speed rpm	: 100
CRT mm min.	: > 19.50
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.35 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 13.35 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 13.35 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	500 : 10.40 : + 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 440 : 12.05 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 270 : 11.00 : ← 0.15
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 1050 : 215.0 : + 4.0 : + 6.0

: -500 : 153.0 : + 1.0 : + 4.0
: 12.30 : 1095 : + 5
IVERY
: 100 : 10.40 : ← 0.20 : 170.0 : ← 20.0
: 350 : 4.70 : + 0.30 : 19.0 : + 3.0 : + 6.0 : 4.0 : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 12.12.94 : ISO 4113

Combination No. : 0402678813

Injection pump

Pump designation : PE8P120A720LS7125

: -10

EP type number

: 0412628891

Governor

Governer design. : RSV350...1050P1A512

: -2

Governer no.

: 0421833324

Cust. part No. : 1305131

Customer-spec. information Customer : SCANIA

Motor

: DS 14

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve : 1417413025

Inlet press. bar :

Tolerance bar : +-

Test nozzle holde

assembly

: 1688901019

Opening pressure

bar

208.5

Tolerance bar

1.5

Test lines

: 1680750015

Outside diameter :

6.0

x inside diameter: 3.0 600 x Lenath mm

REMARKS

Check and set without ROBO diaphragam

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 5.05 : + 0.05 Tolerance mm

test only : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm

Firing order : 1-2-7-3-4

: - 5- 6- 8

: 0-45-90-135-180 Phasing

: -225-270-315 : + - 0.30Tolerance

Check

tolerance *NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 13.55

: +- 0.05 Tolerance mm

Del. quantity -	+ Tolerance
cm3/1000 strokes : 215.0 -	- cm3/1000 strokes : +- 1.0
	- Check tolerance
Tolerance -	+ cm3/1000s. : $+$ 4.0
cm3/1000 strokes : $+-$ 1.0	- Spreed
	Tolerance
Check tolerance	cm3/1000 strokes : 6.0
$cm3/1000s.$: \leftarrow 4.0	Check tolerance
Channel	- cm3/1000s. : 9.0
Spreed Tolerance	
cm3/1000 strokes : 6.0	RATED SPEED
dib/food strokes . 0.0	L RATED SPEED
Check tolerance	
cm3/1000s. : 9.0	control lever
. ,,,	position degree : 48.0
2nd speed rpm : 350 -	tolerance degree : + 4.0
	-
Rack travel in mm: 4.70	control lever
Tolerance mm : +- 0.30	- position degree : 98.0
Del. quantity	tolerance degree : +- 4.0
cm3/1000 strokes : 17.0	
Tolerance -	- rack travel mm : 12.50
cm3/1000 strokes : + 2.0	- Rated speed rpm : 1095 _
Check tolerance -	- Tolerance 1/min : +- 5
cm3/1000s. : +- 4.0 -	-
Spreed	rack travel mm : 4.00
Tolerance	- Rated speed rpm : 1130
cm3/1000 strokes : 3.0	- Tolerance 1/min : +- 15
Check tolerance - cm3/1000s. : 6.0 -	
cm3/1000s. : 6.0 -	- rack travel mm : 0.85 - Tolerance mm : +- 0.55
]	- Tolerance mm : +- 0.55 - Rated speed rpm : 1250
(B) SETTING OF INJECTION PUMP	Rated speed rpill : 1200
WITH GOVERNOR	
W2, 11 00 12 11 01 1	- LOW IDLE
	-
	- -
GUIDE SLEEVE POSITION	- control lever
4	- position degree : 68.0
1	- tolerance degree : +- 4.0
control lever	
position degree : -3	- control lever
Rated speed rpm : 800	- position degree : 18.0
Park travel in m 0.50	tolerance degree : + 4.0
Rack travel in mm: 0.50	Catting maint/a.t. b
Tolerance mm : +- 0.20	 Setting point w/out bumper spring
governor spring	- Rated speed rpm : 350
pre-tension	- Rated speed rpm : 350 - rack travel mm : 4.20
click setting x : 2.50	- Tack Cravec IIIII . 4.20
Terror secting x . 2.30	- Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	- Rated speed rpm : 350
	rack travel mm : 4.70
Rated speed rpm : 700	- Tolerance mm : + 0.10
Aneroid pressure	•
hPa : -	rack travel mm : 2.00
Del. quantity	- Rated speed rpm : 460
cm3/1000 strokes : 215.0	- Tolerance 1/min : + 30
•	

Rated speed rpm : 100 : > 19.50 CRT mm min. TORQUE CONTROL 700 Rated speed rpm rack travel mm 13.55 Tolerance mm : **←** 0.05 950 Rated speed rpm : 13.35 rack travel mm : Tolerance mm : \leftarrow 0.05 AMEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 13.55 : +- 0.05 Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm 500 rack travel mm : 11.40 : + - 0.20Tolerance mm Rated speed rpm 500 365 Pressure hPa rack travel mm 12.85 Tolerance mm : +- 0.05 215 Pressure hPa 11.90 rack travel mm Tolerance mm : + - 0.15FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 207.0 Tolerance cm3/1000 strokes : +-Check tolerance cm3/1000s. : +-6.0

Aneroid pressure Rated speed rpm 500 Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +- 4.0 BREAKAWAY Rack travel in mm: 12.50 Rated speed rpm : 1095 Tolerance 1/min : +-STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 20.50 : +- 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 265.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s. : + 24.0LOW IDLE Rated speed rpm 350 : 4.70 rack travel mm : + - 0.30Tolerance mm Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : \leftarrow 2.0 Check tolerance cm3/1000s. 4.0 : +-Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 12.12.94 Edition : ISO 4113 Test oil

Combination No. : 0402736801

Injection pump

Pump designation : PES6P110A120RS7186

EP type number : 0412716800

Governor

Governer design. : RQV350...1250PA924

: -1K

: 0421815226 Governer no.

Cust. part No. :

Customer-spec. information Customer : CDC Motor : 6BTA

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2417413047

Overflow quantity

min. L/h 165 Tolerance 1/h

Test nozzle holde

: 1688901101 assembly

Opening pressure

208.5 bar Tolerance bar

: 1680750008 Test lines

Outside diameter : 6.0 x inside diameter: 2.0 600 x length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Prestroke mm : +- 0.05 Tolerance mm

: + 0.10test only

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-: 4 Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : **←** 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : · + 0.10 Tolerance

Check

tolerance °NW : + - 0.23

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 10.55 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 138.0

Tolerance cm3/1000 strokes : +- 1.0	Check tolerance cm3/1000s. : 9.0
Check tolerance cm3/1000s. : +- 4.0	RATED SPEED
Spreed Tolerance cm3/1000 strokes : 5.0	control lever position degree : 60.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : 9.0	rack travel mm : 9.50 Rated speed rpm : 1295 Tolerance 1/min : + 5
2nd speed rpm : 350	Tolerance 1/min : + 5
Rack travel in mm : 4.70 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 33.0	rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15
Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 5.0	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1480
Spreed Tolerance cm3/1000 strokes : 8.0	LOW IDLE
Check tolerance cm3/1000s. : 12.0	control lever position degree : 15.0 tolerance degree : + 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Testing:
GUIDE SLEEVE POSITION	Rated speed rpm : 350 rack travel mm : 4.70 Tolerance mm : + 0.10
control lever	CONTINUOUS-ACTION CONTROL
position degree : - 1 Rated speed rpm : 1375	Rated speed rpm : 400
Rack travel in mm : 9.00 Tolerance mm : + 3.00	TORQUE CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1250 rack travel mm : 10.55 Tolerance mm : +- 0.05
Rated speed rpm : 1100 Aneroid pressure hPa : 900 Del. quantity	Rated speed rpm : 1100 rack travel mm : 10.35 Tolerance mm : + 0.05
cm3/1000 strokes : 138.0 Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 900 - rack travel mm : 10.20 - Tolerance mm : + 0.10
Check tolerance cm3/1000S. : +- 4.0 Spreed Tolerance	+ Rated speed rpm : 650
cm3/1000 strokes : 5.0	+ rack travel mm : 4.93 + Tolerance mm : + 4.93

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 1250 Pressure hPa 900 10.55 rack travel mm Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa 1250 Rated speed rom 6.90 rack travel mm Tolerance mm : +- 0.20

1250 Rated speed rom

200 Pressure hPa 7.45 rack travel mm Tolerance mm : ← 0.05

330 Pressure hPa : rack travel mm 8.60 Tolerance mm : + - 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 500 Rated speed rpm Del. quantity cm3/1000 strokes : 88.0

Tolerance cm3/1000 strokes 2.0 : +--

Check tolerance

cm3/1000s.4.0

BREAKAWAY

Rack travel in mm : 9.50 1295 Rated speed rpm : Tolerance 1/min : +-

LOW IDLE

Rated speed rpm : 350

: + 0.10Tolerance mm Del. quantity 33.0 cm3/1000 strokes : Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

4.70

rack travel mm

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.12.94 Test oil : ISO 4113

Combination No. : 0402736855

Injection pump

Pump designation : PES6P120A120RS7206

EP type number : 0412726835

Governor

Governer design. : RQV350...1100PA964

: -%

Governer no. : 0421815425

Cust. part No. : 3282061

Customer spec. information
Customer : CUMMINS
Motor : 6CTA

Power KW : 190.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : +- 0.05

test only $: \leftarrow 0.10$

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300
Tolerance : + 0.30
Check

tolerance *NW : + 0.50

BEGINNING OF DELIVERY DIFFERENCE

S.o.d. blocking

Barrel no. : 1
Tolerance : + 0.10
Check

tolerance "NW : + 0.23

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.00 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 156.0

	+ Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 530 guide sleeve
Check tolerance cm3/1000s. : + 4.0	travel mm : 3.46 Tolerance mm : + 0.25
Spreed	Rated speed rpm : 1550
Tolerance cm3/1000 strokes : 5.0	travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 9.0	CUIDE OF EDUE DOCUTION
2nd speed rpm : 350	GUIDE SLEEVE POSITION
Rack travel in mm: 5.20	control lever
Tolerance mm : + 0.10	position degree : -1
Del. quantity cm3/1000 strokes : 20.5	Rated speed rpm : 1375
Tolerance	T Rack travel in mm: 11.00
$cm3/1000$ strokes : \div 3.0	Tolerance mm : + 2.00
Check tolerance	+
cm3/1000s. : +- 5.0	CULL LOAD DELTUENY AT ELLE LOAD CTOD
Spreed Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 7.0	Rated speed rpm : 1100
Check tolerance	+ Aneroid pressure
cm3/1000s. : 11.0	+ hPa : -
	+ Del. quantity
	1 am7/4000 absolute 454.0
(B) SETTING OF INJECTION PUMP	+ cm3/1000 strokes : 156.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ cm3/1000 strokes : 156.0 + Tolerance + cm3/1000 strokes : + 1.0
	Tolerance cm3/1000 strokes : + 1.0 Check tolerance
WITH GOVERNOR	Tolerance - cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : + 4.0
	Tolerance cm3/1000 strokes : + 1.0 check tolerance cm3/1000s. : + 4.0 Spreed
GUIDE SLEEVE TRAVEL	Tolerance cm3/1000 strokes : + 1.0 check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.36	Tolerance cm3/1000 strokes : + 1.0 check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.36 Tolerance mm : + 0.25 Rated speed rpm : 1177 guide sleeve	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.36 Tolerance mm : + 0.25 Rated speed rpm : 1177 guide sleeve travel mm : 8.80	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.36 Tolerance mm : + 0.25 Rated speed rpm : 1177 guide sleeve	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.36 Tolerance mm : + 0.25 Rated speed rpm : 1177 guide sleeve travel mm : 8.80 Tolerance mm : + 0.25 Rated speed rpm : 828	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.36 Tolerance mm : + 0.25 Rated speed rpm : 1177 guide sleeve travel mm : 8.80 Tolerance mm : + 0.25	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 117.0 tolerance degree : + 4.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.36 Tolerance mm : + 0.25 Rated speed rpm : 1177 guide sleeve travel mm : 8.80 Tolerance mm : + 0.25 Rated speed rpm : 828 guide sleeve	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 117.0 tolerance degree : + 4.0 rack travel mm : 11.00 Rated speed rpm : 1165
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.36 Tolerance mm : +- 0.25 Rated speed rpm : 1177 guide sleeve travel mm : 8.80 Tolerance mm : +- 0.25 Rated speed rpm : 828 guide sleeve travel mm : 5.95 Tolerance mm : +- 0.25	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 117.0 tolerance degree : + 4.0 rack travel mm : 11.00
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.36 Tolerance mm : + 0.25 Rated speed rpm : 1177 guide sleeve travel mm : 8.80 Tolerance mm : + 0.25 Rated speed rpm : 828 guide sleeve travel mm : 5.95 Tolerance mm : + 0.25 Rated speed rpm : 399	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 117.0 tolerance degree : + 4.0 rack travel mm : 11.00 Rated speed rpm : 1165 Tolerance 1/min : + 5
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.36 Tolerance mm : + 0.25 Rated speed rpm : 1177 guide sleeve travel mm : 8.80 Tolerance mm : + 0.25 Rated speed rpm : 828 guide sleeve travel mm : 5.95 Tolerance mm : + 0.25 Rated speed rpm : 399 guide sleeve	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 117.0 tolerance degree : + 4.0 rack travel mm : 11.00 Rated speed rpm : 1165 Tolerance 1/min : + 5 rack travel mm : 4.00
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.36 Tolerance mm : + 0.25 Rated speed rpm : 1177 guide sleeve travel mm : 8.80 Tolerance mm : + 0.25 Rated speed rpm : 828 guide sleeve travel mm : 5.95 Tolerance mm : + 0.25 Rated speed rpm : 399	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 117.0 tolerance degree : + 4.0 rack travel mm : 11.00 Rated speed rpm : 1165 Tolerance 1/min : + 5
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.36 Tolerance mm : + 0.25 Rated speed rpm : 1177 guide sleeve travel mm : 8.80 Tolerance mm : + 0.25 Rated speed rpm : 828 guide sleeve travel mm : 5.95 Tolerance mm : + 0.25 Rated speed rpm : 399 guide sleeve travel mm : 1.98 Tolerance mm : + 0.25	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 117.0 tolerance degree : + 4.0 rack travel mm : 11.00 Rated speed rpm : 1165 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1285 Tolerance 1/min : + 15
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.36 Tolerance mm : + 0.25 Rated speed rpm : 1177 guide sleeve travel mm : 8.80 Tolerance mm : + 0.25 Rated speed rpm : 828 guide sleeve travel mm : 5.95 Tolerance mm : + 0.25 Rated speed rpm : 399 guide sleeve travel mm : 1.98 Tolerance mm : + 0.25 Rated speed rpm : 1.98 Tolerance mm : + 0.25	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 117.0 tolerance degree : + 4.0 rack travel mm : 11.00 Rated speed rpm : 1165 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1285 Tolerance 1/min : + 15 rack travel mm : 0.50
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.36 Tolerance mm : + 0.25 Rated speed rpm : 1177 guide sleeve travel mm : 8.80 Tolerance mm : + 0.25 Rated speed rpm : 828 guide sleeve travel mm : 5.95 Tolerance mm : + 0.25 Rated speed rpm : 399 guide sleeve travel mm : 1.98 Tolerance mm : + 0.25	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 117.0 tolerance degree : + 4.0 rack travel mm : 11.00 Rated speed rpm : 1165 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1285 Tolerance 1/min : + 15

LOW IDLE	
control lever position degree tolerance degree	: 70.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 5.20 : + 0.10
Rated speed rpm	: 200
CRT mm min.	: > 6.70
CONTINUOUS-ACTION	I CONTROL
Rated speed rpm	: 325
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 12.00 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 10.90 : ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 400 : 10.10 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 950 : 11.95 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : 1400 : 12.00 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm	: - : 1100 : 8.50

- 1	. 0.00
Tolerance mm	: +- 0.20
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 770 : 11.00 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 530 : 9.40 : ← 0.20
START CUT-OUT	
Rated speed rpm Check	: > 100
speed 1/min Rated speed rpm Check	: > 80 : < 270
speed 1/min	: < 290
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes	: + 3.0 : + 6.0 : 8.0 : 12.0 : 500 : 119.5 : + 1.0
cm3/1000s.	: + 4.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 11.00 : 1165 : ← 5

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 253.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance cm3/1000s.

: +- 24.0

LOW IDLE

350 5.20 Rated speed rpm rack travel mm 0.10 Tolerance mm Del. quantity

cm3/1000 strokes: 20.5

Tolerance cm3/1000 strokes : +-3.0

Check tolerance cm3/1000s. 5.0

Spreed Tolerance

cm3/1000 strokes : 7.0

Check tolerance

cm3/1000s. 11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.12.94 Test oil : ISO 4113

Combination No. : 0402736856

Injection pump

Pump designation : PES6P110A120RS7213

EP type number : 0412716804

Governor

Governer design. : RQV350...1250PA964

: -26K

Governer no. : 0421815426

Cust. part No. : 3282240

Customer spec. information Customer : CUMMINS Motor : 6BTAA

Power KW : 172.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.40 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: + 0.50

: -300

Tolerance : + 0.30 Check

BEGINNING OF DELIVERY DIFFERENCE

S.o.d. blocking

tolerance °NW

Barrel no. : 1 Tolerance : \leftarrow 0.10

Check tolerance *NW : +- 0.23

tolerance NW : +- 0.23

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 15.10 Tolerance mm : $\leftarrow 0.05$

Del. quantity cm3/1000 strokes : 158.5

+	Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 1620 guide sleeve
Check tolerance cm3/1000s. : + 4.0	travel mm : 11.50 Tolerance mm : + 0.50
Spreed Tolerance cm3/1000 strokes : 5.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : 9.0	control lever position degree : - 1 Rated speed rpm : 1440
2nd speed rpm : 350 Rack travel in mm : 5.70 Tolerance mm : + 0.30	Rack travel in mm : 9.00 Tolerance mm : + 3.00
Del. quantity cm3/1000 strokes : 22.5 Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : + 3.0	Rated speed rpm : 1100 Aneroid pressure hPa : 1800
Spreed Tolerance	Del. quantity cm3/1000 strokes : 158.5
cm3/1000 strokes : 7.0 + Check tolerance cm3/1000s. : 11.0 + Check tolerance cm3/1000s.	Tolerance cm3/1000 strokes : + 1.0 Check tolerance
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	<pre>cm3/1000S. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0</pre>
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 350 guide sleeve travel mm : 1.94 Tolerance mm : + 0.25	RATED SPEED control lever
Rated speed rpm : 1346	position degree : 123.0 tolerance degree : + 4.0
travel mm : 8.44 Tolerance mm : + 0.25	rack travel mm : 15.30 Rated speed rpm : 1325 Tolerance 1/min : +- 5
Rated speed rpm : 840 + guide sleeve + travel mm : 4.58 +	rack travel mm : 4.00 Rated speed rpm : 1480
Tolerance mm : + 0.25	Tolerance 1/min : + 15
Rated speed rpm : 403 guide sleeve travel mm : 2.53 Tolerance mm : + 0.25	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1600
Rated speed rpm : 450 guide sleeve travel mm : 2.76	LOW IDLE

		T
control lever position degree tolerance degree	: 70.0 : + 4.0	+
Testing:		Ŧ
Rated speed rpm rack travel mm Tolerance mm	: 5.40	‡
Rated speed rpm	: 250	‡
CRT mm min.	: > 7.20	‡
CONTINUOUS-ACTION	I CONTROL	· ‡
Rated speed rpm	: 375	‡
TORQUE CONTROL		· ‡
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 15.10 : ← 0.05	† † †
Rated speed rpm rack travel mm Tolerance mm	: 800 : 13.70 : ← 0.10	† † †
Rated speed rpm rack travel mm Tolerance mm	: 1250 : 16.30 : + 0.10	Ī
Rated speed rpm rack travel mm Tolerance mm	: 400 : 13.70 : + 0.15	I I
ANEROID/ALTITUDE COMPENSATOR TEST		
SETTING		Ŧ
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1250 : 1800 : 16.30 : ← 0.10	‡
MEASUREMENT		Ŧ
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	1250 9.05 + 0.20	† † †
Rated speed rpm	: 1250	‡

Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 450 : 10.75 : ← 0.20 : 1150 : 14.35 : ← 0.05
START CUT-OUT	
Rated speed rpm Check speed 1/min Rated speed rpm Check speed 1/min	: > 100 : > 80 : < 280 : < 300
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 3.0 : + 6.0 : 8.0 : 12.0 : 500 : 94.0
BREAKAWAY Rack travel in mm	: 15.30
Rated speed rpm Tolerance 1/min STARTING FUEL DEL: Rated speed rpm	
rack travel mm	: 13.50

Tolerance mm : \(\opi \) 0.50
Del. quantity
cm3/1000 strokes : 162.0
Tolerance
cm3/1000 strokes : \(\opi \) 20.0
Check tolerance
cm3/1000s. : \(\opi \) 24.0

LOW IDLE

Rated speed rpm 350 rack travel mm 5.70 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 22.5 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. 11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.12.94 Test oil : ISO 4113

Combination No. : 0402736857

Injection pump

Pump designation : PES6P110A120RS7263

EP type number : 0412716808

Governor

Governer design. : RQV350...1250PA964

: -27K

Governer no. : 0421815427

Cust. part No. : 3282462

Customer—spec. information Customer : CUMMINS Motor : 6BTAA Power KW : 154.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750008

Outside diameter : 6.0

x inside diameter : 2.0 x tength mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.40 Tolerance mm : +- 0.05

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300
Tolerance : + 0.30
Check

tolerance "NW : \leftarrow 0.50

BEGINNING OF DELIVERY DIFFERENCE

S.o.d. blocking

Barrel no. : 1
Tolerance : + 0.10
Check

tolerance °NW : \leftarrow 0.23

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.85
Tolerance mm : +- 0.05

Del. quantity + cm3/1000 strokes : 152.0 +	tolerance degree : +- 4.0
	rack travel mm : 13.50
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 1310 Tolerance 1/min : +- 5
Check tolerance	rack travel mm : 4.00
cm3/1000s. : + 4.0	Rated speed rpm : 1450 _
, , , , , ,	Tolerance 1/min : +- 15
Spreed	
Tolerance	rack travel mm : 0.50
cm3/1000 strokes : 5.0 +	Tolerance mm : + 0.50
Charle to Larance	Rated speed rpm : 1600
Check tolerance + cm3/1000s. : 9.0	
1	LOW IDLE
· 1	LOW IDEE
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	control lever
+	position degree : 72.0
+	tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	control lever
SOIDE STEENE LOSILION	position degree : 17.0
I	tolerance degree : +- 4.0
control Lever	totel alloc degree 4.0
position degree : -1	Testing:
Rated speed rpm : 1440 +	•
+	Rated speed rpm : 350
Rack travel in mm: 9.00	rack travel mm : 5.00
Tolerance mm : + 3.00	Tolerance mm : \leftarrow 0.10
<u> </u>	Rated speed rpm : 250
FULL LOAD DELIVERY AT FULL LOAD STOP	nated speed rpm . Eso
+	CRT mm min. :> 6.50
Rated speed rpm : 1100 +	
Aneroid pressure	CONTENT OF A CETTON CONTENT
hPa : 1200 + Del. quantity +	CONTINUOUS-ACTION CONTROL
cm3/1000 strokes : 152.0	Rated speed rpm : 375
Tolerance	rated speed ton . 373
cm3/1000 strokes : +- 1.0 +	
Check tolerance	TORQUE CONTROL
cm3/1000s. : ← 4.0	Pated around man a 1400
Spreed + Tolerance +	Rated speed rpm : 1100 rack travel mm : 13.85
cm3/1000 strokes : 5.0	rack travel mm : 13.85 Tolerance mm : +- 0.05
Check tolerance	
cm3/1000s. : 9.0	Rated speed rpm : 750
†	rack travel mm : 12.40
DATES COURS	Tolerance mm : \leftarrow 0.10
RATED SPEED	Dated around from a 1250
İ	Rated speed rpm : 1250 rack travel mm : 14.50
control lever	Rated speed rpm : 1250 rack travel mm : 14.50 Tolerance mm : + 0.10
position degree : 63.0	
tolerance degree : +- 4.0 +	Rated speed rpm : 400
+	Rated speed rpm : 400 rack travel mm : 11.65
control lever	Tolerance mm : \leftarrow 0.15
position degree : 121.0 +	

ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 1250 Pressure hPa 1200 rack travel mm 14.50 Tolerance mm : + 0.10MEASUREMENT Pressure hPa 1250 Rated speed rpm rack travel mm 9.35 : +- 0.20 Tolerance mm Rated speed rpm 1250 Pressure hPa 570 11.30 rack travel mm : + 0.20Tolerance mm Pressure hPa 775 13.15 rack travel mm Tolerance mm : **←** 0.05 START CUT-OUT Rated speed rpm 100 : > Check : > speed 1/min 80 : < Rated speed rom 270 Check 290 speed 1/min : < FUEL DELIVERY CHARACTERISTICS Aneroid pressure 1200 hPa Rated speed rpm 750 Del. quantity cm3/1000 strokes : 154.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.12.0 Aneroid pressure hPa

Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 116.0
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000s. : + 4.0

BREAKAWAY

Rack travel in mm : 13.50
Rated speed rpm : 1310
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 12.50 Tolerance mm : \leftarrow 0.50 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : \leftarrow 20.0 Check tolerance cm3/1000s. : \leftarrow 24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.01.95 Test oil : ISO 4113

Combination No. : 0402746918

Injection pump

Pump designation : PES6P120A720LS7373

EP type number : 0412726937

Governor

Governer design. : RQ300/1100PA1013

Governer no. : 0421801599

Cust. part No. : 0220743602

Customer—spec. information Customer : MB—NFZ Motor : 0M447 hLA Power KW : 220.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 110 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Lube oil : 1409918004

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.55 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 6-2-4-1-5-

: 3

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 600

1	
Rack travel in mm: 13.80	Rated speed rpm : 417 guide sleeve
Rack travel in mm: 13.80	travel mm : 4.48
Tolerance mm : + 0.10	Tolerance mm : +- 0.10
Tolerance mm : + 0.10 +	
+	Rated speed rpm : 510
Del. quantity	guide sleeve
cm3/1000 strokes : 206.0	travel mm : 6.00
Tolerance T	Tolerance mm : \leftarrow 0.10
cm3/1000 strokes : + 1.0	Rated speed rpm : 1320
	guide sleeve
Check tolerance	travel mm : 11.50
cm3/1000s. : + 4.0 +	Tolerance mm : +- 0.50
Spreed	
Tolerance	GUIDE SLEEVE POSITION
cm3/1000 strokes : 5.0	44413411
 	Rated speed rpm : 600
Check tolerance	must be selected as an an
cm3/1000s. : 9.0	Rack travel in mm : 20.00 Tolerance mm : + 0.80
2nd speed rpm : 300	roter grice min : TOO
+	1
Rack travel in mm: 6.30	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : + 0.30 +	Buttard on advisor (00
Del. quantity + cm3/1000 strokes : 19.0 +	Rated speed rpm : 600
Tolerance	Aneroid pressure hPa : -
cm3/1000 strokes : + 3.0	Del. quantity
Check tolerance	cm3/1000 strokes : 206.0
cm3/1000s. : +- 6.0	Tolerance
Spreed	cm3/1000 strokes : +- 1.0
Tolerance	Check tolerance
cm3/1000 strokes : 8.0	cm3/1000s. : +- 4.0
Check tolerance + cm3/1000s. : 12.0	Spreed Tolerance
IIID/10003 12.0	cm3/1000 strokes : 5.0
1	Check tolerance
(B) SETTING OF INJECTION PUMP	cm3/1000s. : 9.0
WITH GOVERNOR +	
<u> </u>	DATEN ODEEN
GUIDE SLEEVE TRAVEL	RATED SPEED
+	
Rated speed rpm : 300	control lever
guide sleeve	position degree : 98.0
travel mm : 1.50	tolerance degree : + 4.0
Tolerance mm : + 0.10	rack travel mm : 13.50
Rated speed rpm : 1159	Rated speed rpm : 1153
guide sleeve	rack travel mm : 13.50 Rated speed rpm : 1153 Tolerance 1/min : +- 8
travel mm : 6.35 +	
Tolerance mm : + 0.10 +	rack travel mm : 4.00
Botod aroad mm : 4400	Rated speed rpm : 1240
Rated speed rpm : 1100 + guide sleeve +	Tolerance 1/min : + 15
travel mm : 6.00	rack travel mm : 0.75
travel mm : 6.00 + Tolerance mm : + 0.10	Tolerance mm : + 0.75
·	
c20	

Rated speed rpm : 1350	†
LOW IDLE	START CUT-OUT
LOW IDEL	Rated speed rpm : > 100
control lever	speed 1/min :> 80 Rated speed rpm : < 220
position degree : 73.0 tolerance degree : +- 4.0	+ Check
Testing:	speed 1/min : < 240
Rated speed rpm : 300_	FUEL DELIVERY CHARACTERISTICS
rack travel mm : 6.30 Tolerance mm : + 0.10	Aneroid pressure
rack travel mm : 2.00	+ hPa : - Rated speed rpm : 1100
Rated speed rpm : 400	Del. quantity cm3/1000 strokes : 222.5
Tolerance 1/min : +- 20	+ Cm3/1000 strokes : 222.5 + Tolerance
Rated speed rpm : 200	+ cm3/1000 strokes : + 1.5
CRT mm min. :> 8.20	+ Check tolerance + cm3/1000s. : + 4.5
	+ Spreed
TORQUE CONTROL	Tolerance : 8.0
Rated speed rpm : 600	+ Check tolerance + cm3/1000S. : 12.0
rack travel mm : 13.80	+
Tolerance mm : + 0.10	+ Aneroid pressure + hPa : -
Rated speed rpm : 1100_	+ Rated speed rpm : 500
rack travel mm : 14.50 Tolerance mm : + 0.10	+ Del. quantity + cm3/1000 strokes : 141.0
	Tolerance
Rated speed rpm : 700 rack travel mm : 14.50	+ cm3/1000 strokes : + 1.0 + Check tolerance
Tolerance mm : + 0.10	+ cm3/1000s. : $+$ 4.0
	+ Spreed + Tolerance
ANEROID/ALTITUDE	+ cm3/1000 strokes : 8.0
COMPENSATOR TEST	+ Check tolerance + cm3/1000S. : 12.0
	+
MEASUREMENT	BREAKAWAY
Pressure hPa : 150	Ţ
rack travel mm : -2.10 Tolerance mm : + 0.10	+ Rack travel in mm : 13.50 - Rated speed rpm : 1153
	Tolerance 1/min : + 8
Pressure hPa : 350 rack travel mm : -0.60	‡
Tolerance mm : + 0.10	CTARTING EUEL DELTUERY
Pressure hPa : 800	STARTING FUEL DELIVERY
rack travel mm : 0.20 Tolerance mm : + 0.10	+ Rated speed rpm : 100 + Del. quantity
TOTAL TOTAL TOTAL	+ cm3/1000 strokes : 230.0
	II

Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm 300 : 6.30 : ← 0.30 rack travel mm Tolerance mm Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 23.01.95 Test oil : 180 4113

Combination No. : 0402746952

Injection pump

Pump designation : PES6P120A320RS7294

EP type number : 0412726895

Governor

Governer design. : RQV275...1000PA1001

: -2

Governer no. : 0421813989

Cust. part No. : CCEP-5136 66-214

Customer spec. information

Customer : RVI

Motor : MIDR 063540 N/3

Power KW : 283.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40Tolerance °C : \leftarrow 2.0

Overflow valve : 2417413071

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : + 0.05

test only $: \leftarrow 0.10$

Rack travel in mm : 19.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.30

Check

tolerance *NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : -7.25

Tolerance mm : + 0.30 +	•
No. Cumtitu	GUIDE SLEEVE TRAVEL
Del. quantity cm3/1000 strokes : 74.0	GOIDE STEENE INVEST
4157 1555 STICKES . 74.0	Rated speed rpm : 300
Tolerance	guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 1.66
	Tolerance mm : + 0.10
Check tolerance	•
cm3/1000s. : \leftarrow 4.0	Rated speed rpm : 1086
canad †	guide sleeve
Spreed	travel mm : 8.46 Tolerance mm : +- 0.10
Tolerance	ioterance iiiii : += 0.10
cm3/1000 strokes : 4.0	Rated speed rpm : 773
Sher toos out ones i	guide sleeve
Check tolerance	travel mm : 6.09
cm3/1000s. : 7.0	Tolerance mm : + 0.20
+	
Rated speed rpm : 600 +	Rated speed rpm : 343
***************************************	guide sleeve
Dook drough in on a 47.75	travel mm : 2.33
Rack travel in mm: 13.35	Tolerance mm : ← 0.20
Toterance iiiii : += 0.03	Rated speed rpm : 393
Del. quantity	guide sleeve
cm3/1000 strokes : 290.0	travel mm : 2.99
	Tolerance mm : + 0.20
Tolerance	
cm $3/1000$ strokes : \leftarrow 2.0 $+$	Rated speed rpm : 490
+	guide sleeve
Check tolerance	travel mm : 3.81
cm3/1000s. $: \leftarrow 5.0$	Tolerance mm : + 0.20
Spreed	Detect aread may a 4770
Tolerance	Rated speed rpm : 1370 guide sleeve
cm3/1000 strokes : 8.0	travel mm : 11.50
	Tolerance mm : + 0.50
Check tolerance +	
cm3/1000s. : 12.0 +	
+	GUIDE SLEEVE POSITION
2nd speed rpm : 300 +	
Rack travel in mm: -8.20	control loven
Tolerance mm : + 0.20	control lever position degree : - 1
Del. quantity	Rated speed rpm : 1200
cm3/1000 strokes : 31.0	nacea speed (piii : 1200
Tolerance	Rack travel in mm : 12.20
cm3/1000 strokes : + 2.5	Tolerance mm : +- 1.30
Check tolerance +	
cm3/1000s. : + 5.0 +	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes : 6.0	Pated around many
Check tolerance	Rated speed rpm : 600
cm3/1000s. : 10.0	Aneroid pressure hPa : 1000
I. (0.0	Del. quantity
1	cm3/1000 strokes : 290.0
(B) SETTING OF INJECTION PUMP	Tolerance
WITH GOVERNOR +	cm3/1000 strokes : +- 2.0
627	
#3" ##	

Check tolerance cm3/1000s. : + 5.0 cm3/1000s. : + 5.0 cm3/1000s.	rack travel mm : -4.50 Tolerance mm : +- 0.10
cm3/1000 strokes : 8.0 + Check tolerance	ANEROID/ALTITUDE COMPENSATOR TEST
cm3/1000s. : 12.0	SETTING
RATED SPEED	Rated speed rpm : 500 Pressure hPa : 1000
control lever position degree : 301.0 tolerance degree : + 4.0	MEASUREMENT
rack travel mm : -1.00 Rated speed rpm : 1070 Tolerance 1/min : +- 5	Pressure hPa : - Rated speed rpm : 500 rack travel mm : -3.80 Tolerance mm : +- 0.20
rack travel mm : -9.30 Rated speed rpm : 1205 Tolerance 1/min : +- 15	Rated speed rpm : 500 Pressure hPa : 240
rack travel mm : -12.85 Tolerance mm : + 0.55 Rated speed rpm : 1350	rack travel mm : -2.60 Tolerance mm : +- 0.20
LOW IDLE	Pressure hPa : 480 rack travel mm : -0.75 Tolerance mm : + 0.05
control lever position degree : 247.0 tolerance degree : + 4.0 Testing:	START CUT-OUT Rated speed rpm : > 100 Check speed 1/min : > 80 Rated speed rpm : < 195 Check
Rated speed rpm : 300 rack travel mm : -8.20 Tolerance mm : + 0.10	speed 1/min : < 215
Rated speed rpm : 200	FUEL DELIVERY CHARACTERISTICS Aneroid pressure
CRT mm max. : < -6.80	hPa : 1000 Rated speed rpm : 600 Del. quantity
CONTINUOUS-ACTION CONTROL	cm3/1000 strokes : 74.0 Tolerance
Rated speed rpm : 365	cm3/1000 strokes : +- 1.0 Check tolerance
TORQUE CONTROL	cm3/1000s. : +- 4.0 Spreed Tolerance
Rated speed rpm : 600	cm3/1000 strokes : 4.0 Check tolerance
Rated speed rpm : 1000 Tolerance mm : + 0.10	cm3/1000s. : 7.0
Rated speed rpm : 600	Aneroid pressure hPa : 1000

Rated speed rpm	: 1000
Del. quantity cm3/1000 strokes	: 270.0
Tolerance cm3/1000 strokes	: +- 4.0
Check tolerance	
cm3/1000s.	: +- 7.0
Aneroid pressure hPa	: 1000
Rated speed rpm Del. quantity	: 600
cm3/1000 strokes	: 159.0
Tolerance cm3/1000 strokes	: +- 5.0
Check tolerance cm3/1000s.	: +- 8.0
Spreed Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
Aneroid pressure	
hPa Rated speed rpm	500
Del. quantity	
cm3/1000 strokes Tolerance	: 167.0
cm3/1000 strokes Check tolerance	: ← 1.0
cm3/1000s.	: + 4.0
BREAKAWAY	
Rack travel in mm	: -1.00
Rated speed rpm Tolerance 1/min	
roterance itmin	·
STARTING FUEL DELI	
Del. quantity	
cm3/1000 strokes Tolerance	: 160.0
cm3/1000 strokes	: +- 10.0
Check tolerance cm3/1000s.	: + 14.0
LOW IDLE	
Rated speed rpm	: 300
rack travel mm Tolerance mm	: −8.20 : ← 0.20

Del. quantity
cm3/1000 strokes : 31.0
Tolerance
cm3/1000 strokes : + 2.5
Check tolerance
cm3/1000s. : + 5.0
Spreed
Tolerance
cm3/1000 strokes : 6.0
Check tolerance
cm3/1000s. : 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 24.01.95 Edition Test oil : ISO 4113

Combination No. : 0402746961

Injection pump

Pump designation : PES6P120A720RS7292

: -1

EP type number : 0412726939

Governor

Governer design. : RQV350...1150PA1104

: -2K

Governer no. : 0421815372

Cust. part No. : 0250741202

Customer-spec. information Customer : MB-NFZ Motor : 0M366LA : 142.0

Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413047

Inlet press. bar : Tolerance bar

Tolerance L/h : **←** 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

bar Tolerance bar 1.5

Lube oil : 1409918004 Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter : x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : ← 1.0

Prestroke mm 4.00 Tolerance mm : +- 0.05

test only : + 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300 : + 0.30Tolerance

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

*NW after s.o.d. : 3.0 S.o.d. blocking

Barrel no.

*NW after s.o.d. : 3.0

BASIC SETTING

Rated speed rpm : 1150	Rated speed rpm : 367 guide sleeve
Rack travel in mm : 14.50 Tolerance mm : + 0.05	travel mm : 1.96 Tolerance mm : + 0.25
Del. quantity cm3/1000 strokes : 285.0	Rated speed rpm : 417 guide sleeve travel mm : 2.46
Tolerance cm3/1000 strokes : + 1.0	Tolerance mm : + 0.25 Rated speed rpm : 510
Check tolerance	guide sleeve : 3.11
cm3/1000S. : +- 4.0	Tolerance mm : + 0.25 Rated speed rpm : 1480
Tolerance cm3/1000 strokes : 8.0 Check tolerance	guide sleeve travel mm : 13.50 Tolerance mm : + 0.50
cm3/1000s. : 12.0	GUIDE SLEEVE POSITION
2nd speed rpm : 350	
Rack travel in mm : 7.30 Tolerance mm : ← 0.30 Del. quantity cm3/1000 strokes : 13.0	+ control lever + position degree : - 1 + Rated speed rpm : 1315
Tolerance cm3/1000 strokes : + 3.0 Check tolerance	Rack travel in mm : 13.50 Tolerance mm : +- 2.50
cm3/1000s. : + 6.0 Spreed Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 4.0 Check tolerance	Rated speed rpm : 1150 Aneroid pressure
cm3/1000s. : 8.0	+ hPa : 1500 - Del. quantity - cm3/1000 strokes : 285.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance - cm3/1000 strokes : + 1.0 - Check tolerance
GUIDE SLEEVE TRAVEL	+ cm3/1000s. : + 4.0 + Spreed
Rated speed rpm : 350 guide sleeve	Tolerance cm3/1000 strokes : 8.0 Check tolerance
travel mm : 1.84 Tolerance mm : + 0.25	- cm3/1000s. : 12.0
Rated speed rpm : 1208 guide sleeve	RATED SPEED
travel mm : 9.41 Tolerance mm : + 0.25	control lever
Rated speed rpm : 836 guide sleeve	<pre>position degree : 108.0 tolerance degree : +- 4.0</pre>
travel mm : 5.58 Tolerance mm : + 0.25	rack travel mm : 13.50 Rated speed rpm : 1195 Tolerance 1/min : +- 5

rack travel mm : 4.00	+ rack travel mm : 14.50 + Tolerance mm : ← 0.05
Rated speed rpm : 1320 Tolerance 1/min : +- 15	MEASUREMENT
rack travel mm : 0.70 Tolerance mm : +- 0.70 Rated speed rpm : 1400	Pressure hPa : - Rated speed rpm : 1150 rack travel mm : 11.30 Tolerance mm : + 0.15
LOW IDLE	Rated speed rpm : 1150
control lever position degree : 62.0 tolerance degree : + 4.0	Pressure hPa : 870 rack travel mm : 13.70 Tolerance mm : +- 0.05 Pressure hPa : 380
Testing:	rack travel mm : 12.00 Tolerance mm : +- 0.20
Rated speed rpm : 350 rack travel mm : 5.00 Tolerance mm : +- 0.10	START CUT-OUT
Rated speed rpm : 250	Rated speed rpm : > 100
CRT mm min. : > 6.50	Check speed 1/min : > 80 Rated speed rpm : < 270
CONTINUOUS-ACTION CONTROL	
	T
Rated speed rpm : 400	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 400 TORQUE CONTROL	
TORQUE CONTROL	Aneroid pressure hPa : 1500 Rated speed rpm : 750
TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 14.50 Tolerance mm : + 0.05 Rated speed rpm : 950	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 280.0 Tolerance cm3/1000 strokes : + 2.0
TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 14.50 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 14.45 Tolerance mm : + 0.10	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 280.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0
TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 14.50 Tolerance mm : + 0.05 Rated speed rpm : 950	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 280.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 14.50 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 14.45 Tolerance mm : + 0.10	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 280.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 Aneroid pressure
TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 14.50 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 14.45 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 13.70 Tolerance mm : + 0.10 Rated speed rpm : 600 rack travel mm : 13.65 Tolerance mm : + 0.10	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 280.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : 1500 Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 284.0
TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 14.50 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 14.45 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 13.70 Tolerance mm : + 0.10 Rated speed rpm : 600 rack travel mm : 13.65 Tolerance mm : + 0.10	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 280.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : 1500 Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 284.0 Tolerance cm3/1000 strokes : 284.0 Tolerance cm3/1000 strokes : + 3.0
TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 14.50 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 14.45 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 13.70 Tolerance mm : + 0.10 Rated speed rpm : 600 rack travel mm : 13.65 Tolerance mm : + 0.10	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 280.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : 1500 Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 284.0 Tolerance

Rated speed rpm 500 Del. quantity cm3/1000 strokes : 165.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. : +-4.0 BREAKAWAY Rack travel in mm : Rated speed rpm : 13.50 Tolerance 1/min STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 14.50 Tolerance mm : + 0.20Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : + 15.0Check tolerance cm3/10000s.: +- 19.0 LOW IDLE 350 Rated speed rpm 7.30 rack travel mm 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s.6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 20.01.95 : ISO 4113

Combination No. : 0402746993

Injection pump

Pump designation : PES6P120A720LS7341

EP type number : 0412726913

Governor

Governer design. : RQV350...1150PA1159

Governer no. : 0421814099

Cust. part No. : 0250742302

Customer-spec. information Customer : MTU : 6-R-183 Motor

Power KW : 440.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : ÷ + 0.1 Tolerance bar

Tolerance 1/h : + 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

Lube oil : 1409918004 Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter:

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

: 6-2-4-1-5-: 3 Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : **←** 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 10.20 Tolerance mm : \leftarrow 0.05

	_ + Rated speed rpm : 466
Del. quantity	- duide sleeve
cm3/1000 strokes : 273.0	travel mm : 3.35 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : +- 1.0	- Rated speed rpm : 600
Check tolerance cm3/1000s. : +- 4.0	_ + guide sleeve + travel mm : 3.83 + Tolerance mm : + 0.25
	1000101100 11111
Spreed Tolerance cm3/1000 strokes : 6.0	Rated speed rpm : 1308 guide sleeve
Check tolerance	+ travel mm : 10.00 - Tolerance mm : + 0.25
cm3/1000s. : 9.0	Rated speed rpm : 1410 guide sleeve
2nd speed rpm : 350	travel mm : 11.50 Tolerance mm : + 0.50
Rack travel in mm : 4.10 Tolerance mm : +- 0.30	Total differential 1. 1. 0.30
Del. quantity cm3/1000 strokes : 17.0	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : +- 3.0	control lever
Check tolerance	<pre>position degree : - 1</pre>
cm3/1000s. : + 6.0 Spreed	Rated speed rpm : 1260
Tolerance	+ Rack travel in mm : 13.00
cm3/1000 strokes : 6.0	+ Tolerance mm : +- 1.30
Check tolerance	Tolerance mm : +- 1.30
	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600
Check tolerance cm3/1000s. : 10.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 800
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206 guide sleeve	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206 guide sleeve travel mm : 8.35 Tolerance mm : + 0.20 Rated speed rpm : 950 guide sleeve	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206 guide sleeve travel mm : 8.35 Tolerance mm : + 0.20 Rated speed rpm : 950 guide sleeve travel mm : 5.78	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206 guide sleeve travel mm : 8.35 Tolerance mm : + 0.20 Rated speed rpm : 950 guide sleeve travel mm : 5.78 Tolerance mm : + 0.25 Rated speed rpm : 416	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.15 Rated speed rpm : 1206 guide sleeve travel mm : 8.35 Tolerance mm : + 0.20 Rated speed rpm : 950 guide sleeve travel mm : 5.78 Tolerance mm : + 0.25	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 273.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 120.0

rack travel mm : 4.00 + Rated speed rpm : 1300 + Tolerance 1/min : +- 15	Pressure hPa : 200 rack travel mm : 6.55 Tolerance mm : + 0.05
rack travel mm : 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1400	Pressure hPa : 400 rack travel mm : 8.40 Tolerance mm : + 0.10
LOW IDLE	Pressure hPa : 1300 rack travel mm : 11.70 Tolerance mm : +- 0.05
LOW IDEE	Toter di ice iiiii . Toto
control lever position degree : 65.0 tolerance degree : + 4.0	Pressure hPa : 1700 rack travel mm : 13.80 Tolerance mm : + 0.10
Testing:	START CUT-OUT
Rated speed rpm : 350 rack travel mm : 4.10 rolerance mm : + 0.10	Rated speed rpm : > 220 Check speed 1/min : > 200
Rated speed rpm : 250	speed 1/min :> 200 Rated speed rpm : < 270 Check
CRT mm min. : > 5.60	speed 1/min : < 290
CONTINUOUS—ACTION CONTROL Rated speed rpm : 425	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 2000 Rated speed rpm : 1150
TORQUE CONTROL	Del. quantity cm3/1000 strokes : 344.0
Rated speed rpm : 600 rack travel mm : 10.20	Tolerance cm3/1000 strokes : +- 3.0 Check tolerance
Tolerance mm : + 0.05	cm3/1000s. : + 4.5 Spreed
Rated speed rpm : 1150 + rack travel mm : 14.50 + Tolerance mm : + 0.10	Tolerance cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm : 800	cm3/1000s. : 12.0
rack travel mm : 14.50 + Tolerance mm : + 0.10	Aneroid pressure hPa : - Rated speed rpm : 500
ANEROID/ALTITUDE	Del. quantity cm3/1000 strokes : 127.0
COMPENSATOR TEST	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
MEASUREMENT	cm3/1000s. : ← 4.0 Spreed
Pressure hPa : - FRated speed rpm : 600	Tolerance cm3/1000 strokes : 8.0 Check tolerance
rack travel mm : 6.20 Tolerance mm : + 0.10	cm3/1000s. : 12.0

BREAKAWAY

Rack travel in mm : 13.50 Rated speed rpm : 1195 Tolerance 1/min 5

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 15.60 Tolerance mm : **←** 0.10 Del. quantity cm3/1000 strokes : 410.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0 Check tolerance

cm3/1000s. : **←** 24.0

LOW IDLE

Rated speed rpm 350 4.10 rack travel mm Tolerance mm : ← 0.30 Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s.

10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 19.01.95 Test oil : 180 4113

Combination No. : 0403274005

Injection pump

Pump designation : PES4MW100/720RS1519

: -2

EP type number : 0413204017

Governor

Governer design. : RSV350...1200MW0A356

Governer no. : 0420085231

Cust. part No. : 0250740802

Customer-spec. information

Customer : MB-NFZ Motor : 0M364LA Power KW : 103.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm: 21.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270 Tolerance : +- 0.50

Check : +- U.Su

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 13.90 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 126.0

Tolerance cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 4.0

Spreed

Talamana	1
Tolerance cm3/1000 strokes : 5.0	control lever position degree : 96.0
Check tolerance cm3/1000s. : 8.0	tolerance degree : +- 4.0
	rack travel mm : 12.90
Del. quantity	Rated speed rpm : 1245 Tolerance 1/min : +- 5
cm3/1000 strokes : 12.0	+ Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : +- 2.0	t nock travel 1 00
Check tolerance	rack travel mm : 1.00 Tolerance mm : +- 0.70
Check tolerance cm3/1000s. : +- 4.5	Rated speed rpm : 1400
Spreed	- 1100
Tolerance	
cm3/1000 strokes : 2.0	+ LOW IDLE
Check tolerance	
cm3/1000s. : 4.0	Setting point w/out bumper spring
	Rated speed rom · 350
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 350 + rack travel mm : 3.90
WITH GOVERNOR	+
	† Testing:
	Detect arrest arrest 100
GUIDE SLEEVE POSITION	Rated speed rpm : 100
GOIDE SEELVE FOSITION	$\frac{1}{4}$ CRT mm min. : > 19.00
	4
control lever	
position degree : -3	+ TORQUE CONTROL
Rated speed rpm : 800	1200
Pack traval in mm . 0.50	+ Rated speed rpm : 1200
Rack travel in mm : 0.50 Tolerance mm : +- 0.20	rack travel mm : 13.90 Tolerance mm : + 0.05
10 cer di lice liair	
governor spring	Rated speed rpm : 750 rack travel mm : 13.90 Tolerance mm : +- 0.10
pre-tension	+ rack travel mm : 13.90
click setting x : 4.50	+ Tolerance mm : +- 0.10
	†
FULL LOAD DELIVERY AT FULL LOAD STOP	ANEROID/ALTITUDE
TOTAL BOTTO DECENTION TO THE BOTTO OF THE	+ COMPENSATOR TEST
Rated speed rpm : 1200	+
Aneroid pressure	+
hPa : 1400	SETTING
Del. quantity cm3/1000 strokes : 126.0	Rated speed rpm : 500
Tolerance	Pressure hPa : 1400
cm3/1000 strokes : +- 1.0	rack travel mm : 13.90
Check tolerance	+ Tolerance mm : + 0.10
$cm3/1000s.$: \leftarrow 4.0	+
Spreed Talegraphs	+ MEASUREMENT
Tolerance cm3/1000 strokes : 5.0	† Pressure hPa : -
Check tolerance	+ Rated speed rpm : 500
cm3/1000s. : 8.0	rack travel mm : 11.10
· · · · · · · · · · · · · · · · · · ·	+ Tolerance mm : + 0.10
	+
RATED SPEED	Rated speed rpm : 500
	Pressure hPa : 600

: 350 : 11.60
: ← 0.10
RACTERISTICS
: 1400 : 750 : 124.0 : ← 2.0
: + 5.0
: 6.0 : 9.0
: 500 : 67.0 : + 1.0 : + 3.0
: 12.90 : 1245 : + 5
IVERY
: 100 : 150.0 : ← 5.0 : ← 8.0

Del. quantity		
cm3/1000 strokes	•	12.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000S.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	2.0
Check tolerance		
cm3/1000s.	:	4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 19.01.95 : ISO 4113

Combination No. : 0403274006

Injection pump

Pump designation : PES4MW100/720RS1519

EP type number : 0413204018

Governor

Governer design. : RSV350...1200MW0A356

: -1

: 0420085232 Governer no.

Cust. part No. : 0250740702

Customer-spec. information Customer : MB-NFZ

Motor : 0M364LA Power KW : 77.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1419992198

1.5 Inlet press. bar :

Test nozzle holde

: 1688901101 assembly

Opening pressure

208.5 bar Tolerance bar

Test Lines : 1680750089

Outside diameter : 8.0 x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 21.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270 Tolerance : + - 0.50

Check

tolerance °NW : **←** 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 11.15 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 86.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s.

: +- 3.0

Spreed

Tolerance cm3/1000 strokes : 4.5	control lever
Check tolerance cm3/1000s. : 7.0	position degree : 96.0 tolerance degree : +- 4.0
	rack travel mm : 10.15 Rated speed rpm : 1245 Tolerance 1/min : +- 5
Del. quantity	+ Rated speed rpm : 1245
cm3/1000 strokes : 12.0 Tolerance	+ Tolerance 1/min : + 5
cm3/1000 strokes : +- 2.0	rack travel mm : 1.00 Tolerance mm : + 0.70
Check tolerance cm3/1000s. : +- 4.5	Rated speed rpm : 1400
Spreed Tolerance	
cm3/1000 strokes : 2.0	LOW IDLE
Check tolerance cm3/1000s. : 4.0	Satting point whether homes and a
CRID/10005. : 4.0	+ Setting point w/out bumper spring
	Rated speed rpm : 350
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00
MILIU GOAEWACK	Testing:
	Rated speed rpm : 100
GUIDE SLEEVE POSITION	CRT mm min. : > 19.00
control lever	
position degree : - 3	+ TORQUE CONTROL
Rated speed rpm : 800	+
Doub Annual in an a 0.50	+ Rated speed rpm : 1200
Rack travel in mm : 0.50 Tolerance mm : + 0.20	rack travel mm : 11.15 Tolerance mm : +- 0.05
Toterance in : + 0.20	1 Toterance mm : += 0.05
governor spring	Rated speed rom : 750
pre-tension	rack travel mm : 11.15
click setting x : 4.50	Rated speed rpm : 750 rack travel mm : 11.15 Tolerance mm : + 0.10
	+
FULL LOAD DELIVERY AT FULL LOAD STOP	ANEROID/ALTITUDE
	- COMPENSATOR TEST
Rated speed rpm : 1200	+
Aneroid pressure	+
hPa : 1400	+ SETTING
Del. quantity	T Pated aread area is 500
cm3/1000 strokes : 86.0 Tolerance	+ Rated speed rpm : 500 + Pressure hPa : 1500
cm3/1000 strokes : +- 1.0	+ rack travel mm : 11.15
Check tolerance	Tolerance mm : + 0.10
cm3/1000s. : +- 3.0	+
Spreed	+ MEASUREMENT
Tolerance cm3/1000 strokes : 4.5	Droggung hDo
Check tolerance	+ Pressure hPa : - Rated speed rpm : 500
cm3/1000s. : 7.0	+ Tolerance mm : +- 0.10
	1.500 0100 1111
**************************************	Rated speed rpm : 500
RATED SPEED	+
	+ Pressure hPa : 250
	+ rack travel mm : 0.30

Tolerance mm	: ← 0.10
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1400 : 750 : 80.0 : ← 1.5 : ← 4.0 : 6.0 : 9.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - 500 : 71.0 : ← 1.0 : ← 3.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	
STARTING FUEL DEL	IVERY
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 125.0 : ← 5.0 : ← 8.0
LOW IDLE	
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 12.0 : ← 2.0

Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 2.0 Check tolerance cm3/1000s. : 4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23.01.95 Edition : ISO 4113 Test oil

Combination No. : 0403276009

Injection pump

Pump designation : PES6MW100/720RS1517

: -2

EP type number : 0413206019

Governor

Governer design. : RSV350...1200MW0A357

Governer no. : 0420085233

Cust. part No. : 0250740402

Customer-spec. information Customer : MB-NFZ : 0M366LA Motor

Power KW : 155.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

: 1688901101 assembly

Opening pressure

bar Tolerance bar

Test lines : 1680750089

Outside diameter : 8.0 x inside diameter : 3.0 x length mm :

REMARKS

Set pneumatic shutoff device to control-rod stop = 0.5...1.5 mm control-rod travel at 4.5 bar atmospheric pressure.

Test hydr. locking device for starting with 800...1200 hPa air pressure.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : ← 1.0

Prestroke mm Tolerance mm

test only : **←** 0.10

Rack travel in mm : 21.00

: 1-5- 3- 6- 2-: 4 Firing order

: 0-60-120-18G-240 Phasing

: -300

Tolerance : ← 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 13.30 Tolerance mm : + 0.05

Del. quantity +	Spreed
cm3/1000 strokes : 118.0	Tolerance cm3/1000 strokes : 4.5
Tolerance cm3/1000 strokes : + 1.0	Check tolerance cm3/1000s. : 7.0
<u> </u>	Cm5/1000S. : 7.0
Check tolerance cm3/1000s. : + 3.0	RATED SPEED
Spreed	
Tolerance cm3/1000 strokes : 4.5	control lever
<u> </u>	position degree : 108.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 7.0	rack travel mm : 1.00
Del. quantity	Tolerance mm : +- 0.70 Rated speed rpm : 1450
cm3/1000 strokes : 12.0	
Tolerance cm3/1000 strokes : + 2.0	rack travel mm : 4.00 Rated speed rpm : 1375
Check tolerance + 4.5	rack travel mm : 12.30
Spreed - Tolerance -	Rated speed rpm : 1245 Tolerance 1/min : + 5
cm3/1000 strokes : 2.0 +	Toterance Trimm : +- 3
Check tolerance cm3/1000S. : 4.0	LOW IDLE
‡	Setting point w/out bumper spring
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
WITH GOVERNOR	Rated speed rpm : 350 rack travel mm : 3.90
	Testing:
GUIDE SLEEVE POSITION	•
	rack travel mm · 200
Ŧ	rack travel mm : 2.00 Rated speed rpm : 430
control lever position degree : -3	Rated speed rpm : 430
	Rated speed rpm : 430 Rated speed rpm : 100
position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50	Rated speed rpm : 430
position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	Rated speed rpm : 430 Rated speed rpm : 100
position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	Rated speed rpm : 430 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL
position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	Rated speed rpm : 430 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.30
position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50	Rated speed rpm : 430 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.30 Tolerance mm : + 0.05
position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 430 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.30 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.30
position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200	Rated speed rpm : 430 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.30 Tolerance mm : + 0.05 Rated speed rpm : 750
position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1300	Rated speed rpm : 430 Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.30 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.30 Tolerance mm : + 0.10
position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1300 Del. quantity cm3/1000 strokes : 118.0	Rated speed rpm : 430 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.30 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.30
position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1300 Del. quantity	Rated speed rpm : 430 Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.30 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.30 Tolerance mm : + 0.10 ANEROID/ALTITUDE
position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1300 Del. quantity cm3/1000 strokes : 118.0 Tolerance	Rated speed rpm : 430 Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 13.30 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 13.30 Tolerance mm : + 0.10 ANEROID/ALTITUDE

Rated speed rpm 500 Pressure hPa 1300 rack travel mm 13.30 : + - 0.10Tolerance mm

MEASUREMENT

Pressure hPa Rated speed rpm 500 Tolerance mm : + 0.10

Rated speed rpm 500

600 Pressure hPa rack travel mm 3.00 Tolerance mm : + 0.10

300 Pressure hPa rack travel mm 1.20 Tolerance mm : + - 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1300 750 Rated speed rpm

Del. quantity

cm3/1000 strokes : 117.0 Tolerance

cm3/1000 strokes 1.5 Check tolerance

cm3/1000s. Spreed

Tolerance

cm3/1000 strokes 6.0 Check tolerance

cm3/1000s.9.0

Aneroid pressure

hPa Rated speed rpm 500

Del. quantity cm3/1000 strokes : 48.0

Tolerance

cm3/1000 strokes 1.0

Check tolerance

cm3/1000s. : +-3.0

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity

cm3/1000 strokes : 145.0

Tolerance

cm3/1000 strokes : +-

Check tolerance cm3/1000s. : +- 8.0

LOW IDLE

Del. quantity cm3/1000 strokes : 12.0

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. 4.5

Spreed Tolerance

cm3/1000 strokes : 2.0

Check tolerance

cm3/1000s. 4.0

D15

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 20.01.95 Test oil : ISO 4113

Combination No. : 0403476140

Injection pump

Pump designation : PES6MW100/720RS1129

: -2

EP type number : 0413406140

Governor

Governer design. : RSV350...1200MWDA363

Governer no. : 0420085246

Cust. part No. : 0260741902

Customer—spec. information Customer : MB-NFZ Motor : OM 366 A Power KW : 114.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

Set pneumatic shutoff device to control-rod stop = 0.5...1.5 mm control-rod travel at 4.5 bar atmospheric pressure.

Test hydr. locking device for starting with 800...1200 hPa air pressure.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 10.95 Tolerance mm : +- 0.05

Del. quantity +	Spreed
cm3/1000 strokes : 84.0	Tolerance
T	cm3/1000 strokes : 3.5
Talanana	
Tolerance	Check tolerance
cm3/1000 strokes : +- 1.0 +	cm3/1000s. : 6.0
Check tolerance +	
cm3/1000s. : + 3.0	RATED SPEED
1	
Spreed	
Tolerance	control lever
cm3/1000 strokes : 3.5 +	position degree : 104.0
	tolerance degree : +- 4.0
Check tolerance +	
cm3/1000s. : 6.0	rack travel mm : 1.00
1	Tolerance mm : + 0.70
Del. quantity	Rated speed rpm : 1450
cm3/1000 strokes : 11.0	Nated Speed (pii) . 1430
	made Americal arm
Tolerance +	rack travel mm : 4.00
cm3/1000 strokes : + 2.0 +	Rated speed rpm : 1340
Check tolerance +	
cm3/1000s. : + 4.5	rack travel mm : 9.90
Spreed	Rated speed rpm : 1248
Tolerance	Tolerance 1/min : + 8
	roterance mini : +- 6
cm3/1000 strokes : 3.5 +	
Check tolerance	
cm3/1000s. : 5.5	LOW IDLE
+	
1	Setting point w/out bumper spring
(B) SETTING OF INJECTION PUMP	totting petric mode banker opining
	Pated aroad mm 4 750
WITH GOVERNOR	Rated speed rpm : 350
	Rated speed rpm : 350 rack travel mm : 6.15
	rack travel mm : 6.15
WITH GOVERNOR	Rated speed rpm : 350 rack travel mm : 6.15 Testing:
	rack travel mm : 6.15
WITH GOVERNOR	rack travel mm : 6.15 Testing:
WITH GOVERNOR	rack travel mm : 6.15
GUIDE SLEEVE POSITION	rack travel mm : 6.15 Testing: Rated speed rpm : 100
GUIDE SLEEVE POSITION control lever	rack travel mm : 6.15 Testing:
GUIDE SLEEVE POSITION control lever position degree : - 3	rack travel mm : 6.15 Testing: Rated speed rpm : 100
GUIDE SLEEVE POSITION control lever	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. : > 19.00
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800	rack travel mm : 6.15 Testing: Rated speed rpm : 100
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.75
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.75
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 4.75	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.75 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : + 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 1000 rack travel mm : 11.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : + 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 750	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 1000 rack travel mm : 11.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 750 Del. quantity	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 0.10 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 750	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 1000 rack travel mm : 11.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 750 Del. quantity	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.10 Tolerance mm : + 0.10 ANEROID/ALTITUDE
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 750 Del. quantity cm3/1000 strokes : 84.0 Tolerance	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 0.10 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 750 Del. quantity cm3/1000 strokes : 84.0 Tolerance cm3/1000 strokes : + 1.0	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.10 Tolerance mm : + 0.10 ANEROID/ALTITUDE
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 750 Del. quantity cm3/1000 strokes : 84.0 Tolerance	rack travel mm : 6.15 Testing: Rated speed rpm : 100 CRT mm min. :> 19.00 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1000 rack travel mm : 11.10 Tolerance mm : + 0.10 ANEROID/ALTITUDE

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 750 : 11.75 : + 0.10
MEASUREMENT	
Pressure hPa Rated speed rpm Tolerance mm	500 + 0.05
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 400 : 1.75 : ← 0.10
Pressure hPa rack travel mm Tolerance mm	: 300 : 1.15 : + 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	: 750
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 750 : 600
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 750 : 600
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 750 : 600 : 79.5
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 750 : 600 : 79.5 : ← 1.5
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 750 : 600 : 79.5 : ← 1.5 : ← 4.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure	: 750 : 600 : 79.5 : ← 1.5 : ← 4.0 : 5.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 750 : 600 : 79.5 : ← 1.5 : ← 4.0 : 5.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 750 : 600 : 79.5 : + 1.5 : + 4.0 : 5.0 : 7.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 750 : 600 : 79.5 : ← 1.5 : ← 4.0 : 5.0 : 7.0

Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	; +-	5.0 8.0

LOW IDLE			
Del. quantity			
0 1000 00, 0.100	:	11.0	
Tolerance cm3/1000 strokes		2.0	
Check tolerance	: +-	2.0	
cm3/1000S.	: +-	4.5	
Spreed			
Tolerance		7.5	
cm3/1000 strokes Check tolerance	:	3.5	
cm3/1000s.	:	5.5	

Rated speed rpm : Del. quantity cm3/1000 strokes :

100

88.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23.01.95 Edition : ISO 4113 Test oil

Combination No. : 0403476141

Injection pump

Pump designation : PES6MW100/720RS1144

EP type number : 0413406138

Governor

Governer design. : RSV350...1300MWDA364

Governer no. : 0420085247

Cust. part No. :

Customer-spec. information Customer : MB-NFZ : OM 366 LA Motor

Power KW : 127.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1417413047

Inlet press. bar: 1.5

Test nozzle holde

: 0681343009 assembly

Opening pressure

: 173.5 : ← 1.5 bar Tolerance bar

Test lines : 1680750015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Set pneumatic shutoff device to control-rod stop = 0.5...1.5 mm control-rod travel at 4.5 bar atmospheric pressure.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05

test only : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 : ← 0.50 Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.65 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 82.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000s. : + 3.0	RATED SPEED
Spreed	TWITE OF CES
Tolerance cm3/1000 strokes : 3.5	control lever
Check tolerance cm3/1000s. : 6.0	position degree : 107.0 tolerance degree : + 4.0
Del. quantity	rack travel mm : 1.00 Tolerance mm : + 0.70
cm3/1000 strokes : 11.0 Tolerance	Rated speed rpm : 1550
cm3/1000 strokes : + 2.0 + Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1445
cm3/1000s. : +- 4.5 Spreed	rack travel mm : 10.60
Tolerance cm3/1000 strokes : 3.5	Rated speed rpm : 1343 Tolerance 1/min : + 8
Check tolerance cm3/1000S. : 5.0	
‡	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Testing:
+	Rated speed rpm : 350
+	rack travel mm : 6.55
	Tolerance mm : + 0.35
GUIDE SLEEVE POSITION +	
+	rack travel mm : 2.00
†	Rated speed rpm : 470
control lever	Tolerance 1/min : + 30
position degree : -3 + Rated speed rpm : 800 +	Rated speed rpm : 100
Rated speed rpm : 800	Rated speed rpm : 100
Rack travel in mm: 0.65 Tolerance mm: + 0.35	CRT mm min. : > 19.00
governor spring	TORQUE CONTROL
pre-tension + click setting x : 4.20 +	Rated speed rpm : 1300
T T.L.	rack travel mm : 11.65
	Tolerance mm : + 0.05
FULL LOAD DELIVERY AT FULL LOAD STOP	
Rated speed rpm : 1300	Rated speed rpm : 900 rack travel mm : 11.95
Aneroid pressure	Tolerance mm : + 0.10
hPa : -	(Otel airce linii O. lo
Del. quantity	
cm3/1000 strokes : 82.0	
Tolerance	
cm3/1000 strokes : + 1.0 +	FUEL DELIVERY CHARACTERISTICS
Check tolerance	
cm3/1000s. : + 3.0	Aneroid pressure
Spreed	hPa : -
Tolerance cm3/1000 strokes : 3.5	Rated speed rpm : 900
Check tolerance	Del. quantity cm3/1000 strokes : 77.5
cm3/1000s. : 6.0	Tolerance
1 0.0	cm3/1000 strokes : +- 1.5

Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 7.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 85.0
Tolerance
cm3/1000 strokes : +- 5.0
Check tolerance
cm3/1000s. : +- 8.0

LOW IDLE

Del. quantity
cm3/1000 strokes : 11.0
Tolerance
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 4.5
Spreed
Tolerance
cm3/1000 strokes : 3.5
Check tolerance
cm3/1000s. : 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.12.94 Test oil : ISO 4113

Combination No. : 0403486105

Injection pump

Pump designation : PES6MW100/321RS1231

EP type number : 0413406225

Governor

Governer design. : RSV300...1100MW0A343

: -1

Governer no. : 0420085209

Cust. part No. : 3-7263

Customer-spec. information

Customer : MAN

Motor : D0826LE 522

Power KW : 154.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0681343009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1680750008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

test only $: \leftarrow 0.10$

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1 S.o.d. blocking

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1075

Rack travel in mm : 12.10 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 144.0

+	Tolerance
Tolerance	cm3/1000 strokes : 4.0
cm $3/1000$ strokes : \leftarrow 1.0 \downarrow	Check tolerance
	cm3/1000s. : 7.5
Check tolerance	
cm $3/1000$ s. : +- 4.0 +	
	RATED SPEED
Spreed	
Tolerance +	-auto-1 lavan
cm3/1000 strokes : 4.0	control lever
Check tolerance	position degree : 104.0 tolerance degree : +- 4.0
cm3/1000s. : 7.5	totel ance degree 4.0
1.5	rack travel mm : 11.10
Del. quantity	Rated speed rpm : 1130
cm3/1000 strokes : 11.0	Tolerance 1/min : +- 5
Tolerance	
cm3/1000 strokes : + 2.0 +	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 1220
cm3/10000s. : + 4.5 +	Tolerance 1/min : + 15
Spreed	
Tolerance +	rack travel mm : 1.00
cm3/1000 strokes : 3.5 + Check tolerance	Tolerance mm : + 0.70
cm3/1000s. : 5.5	Rated speed rpm : 1350
I	rack travel mm : 4.00
I	1 der 11 dve 1 1 1 1 7.00
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	LOW IDLE
+	
+	
	control lever
GUIDE SLEEVE POSITION +	position degree : 76.0
†	tolerance degree : + 4.0
control lever	Tooting
position degree : -3	Testing:
Rated speed rpm : 800	Rated speed rpm : 300
Tarea speed (pii) . 000	rack travel mm : 5.00
Rack travel in mm: 0.65	Tolerance mm : + 0.10
Tolerance mm : + 0.35	10 (01 (21 100 1111)
	rack travel mm : 2.00
governor spring	Rated speed rpm : 380
pre-tension +	Tolerance 1/min : +- 30
click setting x : 5.75	
+	Rated speed rpm : 100
	00T
FULL LOAD DELIVERY AT FULL LOAD STOP	(2) mm map + > 10 (1)
Rated speed rpm : 1075	CRT mm min. : > 19.00
Aneroid pressure	TORQUE CONTROL
Aneroid pressure hPa : 1000	TORQUE CONTROL
Aneroid pressure	TORQUE CONTROL Rated speed rpm : 1075 rack travel mm : 12.10
Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 144.0 Tolerance	TORQUE CONTROL Rated speed rpm : 1075
Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : +- 1.0	TORQUE CONTROL Rated speed rpm : 1075 rack travel mm : 12.10 Tolerance mm : + 0.05
Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	TORQUE CONTROL Rated speed rpm : 1075 rack travel mm : 12.10 Tolerance mm : + 0.05 Rated speed rpm : 900
Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	TORQUE CONTROL Rated speed rpm : 1075 rack travel mm : 12.10 Tolerance mm : + 0.05 Rated speed rpm : 900 rack travel mm : 12.35
Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	TORQUE CONTROL Rated speed rpm : 1075 rack travel mm : 12.10 Tolerance mm : + 0.05 Rated speed rpm : 900
Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	TORQUE CONTROL Rated speed rpm : 1075 rack travel mm : 12.10 Tolerance mm : + 0.05 Rated speed rpm : 900 rack travel mm : 12.35

Rated speed rpm rack travel mm Tolerance mm	: 600 : 12.40 : ← 0.10	†
ANEROID/ALTITUDE COMPENSATOR TEST		1
SETTING		#
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1000 : 12.40 : ← 0.10	1
MEASUREMENT		#
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	500 9.45 + 0.05	† †
Rated speed rpm	: 500	Ŧ
Pressure hPa rack travel mm Tolerance mm	: 600 : 11.75 : + 0.15	+++++++++++++++++++++++++++++++++++++++
Pressure hPa rack travel mm Tolerance mm	: 150 : 9.75 : ← 0.05	7 7 7
FUEL DELIVERY CHA	RACTERISTICS	Ŧ
Aneroid pressure hPa Rated speed rpm	: 1000 : 900	++++
Del. quantity cm3/1000 strokes Tolerance	: 146.0	I
cm3/1000 strokes Check tolerance cm3/1000s.	: +- 2.0 : +- 5.0	+
Spreed Tolerance cm3/1000 strokes	: 6.0	+
Check tolerance	: 9.0	+
cm3/1000s.		
cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1000 : 600	++++

Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: ← 5.0 : - : 500 : 76.0 : ← 1.0 : ← 3.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 11.10 : 1130 : + 5
STARTING FUEL DEL	IVERY
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S.	: 100 : 125.0 : + 5.0 : + 8.0
LOW IDLE	
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	 : 11.0 : ← 2.0 : ← 4.5 : 3.5 : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.01.95 Test oil : ISO 4113

Combination No. : 0401846759

Injection pump

Pump designation : PE6P110A320RS3108Y

: 0411816729 EP type number

Governor

Governer design. : RQV250...1100PA920

: -1

: 0421815778 Governer no.

Cust. part No. : 469608 PO3

Customer-spec. information

Customer : VOLVO-TRUCK : THD100EC Motor Power KW : 180.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1457413010

Inlet press. bar Tolerance bar

Test nozzle holde

assembly : 0681343009

Opening pressure

173.5 Tolerance bar 1.5

Test Lines : 1680750089

Outside diameter :

x inside diameter : 3.0 600 x length mm

REMARKS

Check electrically unlatched starting fuel delivery (EES) with 24 volt.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm 3.05 : + 0.05 Tolerance mm

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300 : + 0.30Tolerance

Check

tolerance °NW : **←** 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 11.15 Tolerance mm : +- 0.05

8.0

Del. quantity cm3/1000 strokes : 139.0	control lever position degree : 65.0
Tolerance cm3/1000 strokes : + 1.0	tolerance degree : + 4.0
Check tolerance cm3/1000s. : + 4.0	+ rack travel mm : 10.15 + Rated speed rpm : 1165 + Tolerance 1/min : +- 5
Spreed Tolerance cm3/1000 strokes : 4.0	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : + 15
Check tolerance cm3/1000s. : 7.5 2nd speed rpm : 250	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350
zna speed rpili : 250	†
Rack travel in mm : 5.30 Tolerance mm : + 0.10	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 12.0 tolerance degree : +- 4.0
	+ Testing:
GUIDE SLEEVE POSITION	Rated speed rpm : 150
	T CRT mm min. : > 6.30
control lever	† (KI mm min. : > 0.50
	T
position degree : - 1 Rated speed rpm : 1175	CONTINUOUS-ACTION CONTROL
Rack travel in mm : 16.50 Tolerance mm : +- 1.30	Rated speed rpm : 338
CHILLIAN SELECTION AT CHILLIAN SER	4) (2000)
FULL LOAD DELIVERY AT FULL LOAD STOP	+ ANEROID/ALTITUDE
Rated speed rpm : 700	COMPENSATOR TEST
Rated speed rpm : 700 Aneroid pressure	Ī
hPa : 1000	I SETTING
Del. quantity	+ 02112110
cm3/1000 strokes : 139.0	Rated speed rpm : 500
Tolerance	+ Pressure hPa : 1000
cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm : 11.15 Tolerance mm : + 0.05
cm3/1000s. : +- 4.0	100010100 11111
Spreed	+ MEASUREMENT
Tolerance	+
cm3/1000 strokes : 4.0	Pressure hPa :
Check tolerance	+ Rated speed rpm : 500
cm3/1000s. : 7.5	rack travel mm : 9.70
	† Tolerance mm : + 0.10
RATED SPEED	Rated speed rpm : 500
	Tracea opeca i pili . 300
	Pressure hPa : 470
	+ rack travel mm : 1.20
	•

Tolerance mm : **←** 0.10

Pressure hPa 260 0.25 rack travel mm : +- 0.05 Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 700 Rated speed rpm : Del. quantity cm3/1000 strokes : 107.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance cm3/1000s.

BREAKAWAY

Rack travel in mm : 10.15 Rated speed rpm : 1165
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

100 Rated speed rpm rack travel mm : 20.50 : **←** 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 185.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance cm3/1000s.

: + 19.0

LOW IDLE

Rated speed rpm 250 : 5.30 : ← 0.10 rack travel mm Tolerance mm

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26.01.95 Test oil : ISO 4113

Combination No. : 0401846760

Injection pump

Pump designation : PE6P110A320RS3108X

EP type number : 0411816730

Governor

Governer design. : RQV250...1100PA920

: -2

Governer no. : 0421813779

Cust. part No. : 469609-P07 RELEASED

Customer-spec. information

Customer : VOLVO-TRUCK

Motor : THD102

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2417413046

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 0681343009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

Check electrically unlatched starting fuel delivery (EES) with 24 volt.

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.05 Tolerance mm : + 0.05

test only $: \leftarrow 0.10$

Rack travel in mm : 9.70 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 Tolerance : ← 0.30 Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.35 Tolerance mm : + 0.05

Del. quantity + cm3/1000 strokes : 166.0 +	tolerance degree : +- 4.0
Tolerance cm3/1000 strokes : + 1.0	rack travel mm : 11.35 Rated speed rpm : 1165 Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : + 4.0	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : +- 15
Spreed Tolerance cm3/1000 strokes : 4.0	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350
Check tolerance cm3/1000s. : 7.5	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 64.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	control lever position degree : 12.0 tolerance degree : +- 4.0
control lever position degree : -1 Rated speed rpm : 1175	Testing:
Rack travel in mm: 16.50 Tolerance mm: + 1.30	Rated speed rpm : 250 rack travel mm : 5.30 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 150
Rated speed rpm : 700 Aneroid pressure	CRT mm min. : > 6.30
hPa : 1000 +	CONTINUOUS-ACTION CONTROL
Del. quantity cm3/1000 strokes : 166.0 Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 330
Check tolerance cm3/1000s. : + 4.0 + 500 +	ANEROID/ALTITUDE COMPENSATOR TEST
cm3/1000 strokes : 4.0 + Check tolerance cm3/1000s. : 7.5 + Check tolerance cm3/1000s.	SETTING
RATED SPEED	Rated speed rpm : 500 Pressure hPa : 1000 rack travel mm : 12.35 Tolerance mm : +- 0.05
	Tolerance mm : + 0.05
control lever position degree : 65.0 tolerance degree : +- 4.0	MEASUREMENT Pressure hPa : -
control lever position degree : 116.0	Rated speed rpm : 500 rack travel mm : 9.50 Tolerance mm : +- 0.15

E01

Rated speed rpm : 500

Pressure hPa : 760 rack travel mm : 2.50 Tolerance mm : + 0.15

Pressure hPa : 270 rack travel mm : 0.25 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

Rated speed rpm : 700

Del. quantity

cm3/1000 strokes : 114.0

Tolerance

cm3/1000 strokes : + 1.0 Check tolerance

cm3/1000s.: + 4.0

BREAKAWAY

Rack travel in mm : 11.35
Rated speed rpm : 1165
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +0.50

Del. quantity cm3/1000 strokes : 185.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000s. : + 19.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.11.94 Test oil : ISO 4113

Combination No. : 0401846971

Injection pump

Pump designation : PE6P110A320RS3302Z

EP type number : 0411816789

Governor

Governer design. : RQ300/1000PA1012-1

Governer no. : 0421801648

Cust. part No. : 1266367

Customer-spec. information Customer : DAF Motor : LS 195 M Power KW : 195.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 150 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75 Tolerance mm : ← 0.05

test only : \leftarrow 0.10

Rack travel in mm : 14.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 13.95 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 166.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

	+ guide sleeve
Check tolerance cm3/1000s. : + 3.5	travel mm : 11.50 Tolerance mm : + 0.50
Spreed	
Tolerance cm3/1000 strokes : 4.0	GUIDE SLEEVE POSITION
Check tolerance	Rated speed rpm : 600
cm3/1000s. : 7.5	Rack travel in mm : 20.00 Tolerance mm : +- 0.80
2nd speed rpm : 300	
Rack travel in mm: 7.50 Tolerance mm: + 0.10 Del. quantity	FULL LOAD DELIVERY AT FULL LOAD STOP Aneroid pressure
cm3/1000 strokes : 30.0	hPa : -
Tolerance - cm3/1000 strokes : + 2.5 - Chack talenames	Del. quantity cm3/1000 strokes : 166.0
Check tolerance cm3/1000s. : +- 5.0	Tolerance - cm3/1000 strokes : +- 1.0
Spreed - Tolerance -	Check tolerance : +- 3.5
cm3/1000 strokes : 8.0	Spreed
Check tolerance	Tolerance
cm3/1000s. : 11.0 -	- cm3/1000 strokes : 4.0 - Check tolerance
	- cm3/1000s. : 7.5
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
WITH GOVERNOR	- RATED SPEED
CUIDE OF THE TRAVE	
GUIDE SLEEVE TRAVEL	- control lever
Rated speed rpm : 300 - guide sleeve -	- position degree : 97.0 - tolerance degree : +- 4.0
travel mm : 2.07 -	
Tolerance mm : +- 0.10	rack travel mm : 12.95 Rated speed rpm : 1052
Rated speed rpm : 1060 guide sleeve	Tolerance 1/min : + 8
travel mm : 6.35	rack travel mm : 4.00
Tolerance mm : +- 0.10	- Rated speed rpm : 1125 - Tolerance 1/min : + 15
Rated speed rpm : 1000 -	
guide sleeve - travel mm : 6.00 -	- rack travel mm : 0.75 - Tolerance mm : + 0.75
Tolerance mm : + 0.10	- Rated speed rpm : 1250
Rated speed rpm : 373 - guide sleeve -	- LOW IDLE
travel mm : 5.01	- FOM TAFF
Tolerance mm : +- 0.10 -	a control layer
Rated speed rpm : 440 - guide sleeve	- control lever - position degree : 73.0
travel mm : 6.00	- tolerance degree : +- 4.0 -
Tolerance mm : +- 0.10	- Testing:
Rated speed rpm : 1210	- Rated speed rpm : 300

E04

rack travel mm Tolerance mm	: 6.00 : + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 350 : + 20
Rated speed rpm	: 200
CRT mm min.	: > 10.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 850 : 13.95 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.95 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : 1000 : 13.95 : +- 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 600
Pressure hPa rack travel mm Tolerance mm	: 480 : 13.55 : + 0.05
Pressure hPa rack travel mm Tolerance mm	: 340 : 12.60 : + 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	: -
Del. quantity cm3/1000 strokes	: 126.0

Tolerance cm3/1000 strokes Checance	
cm3/1000S.	: + 3.5
BREAKAWAY	
Rack travel in m Rated speed rpm Tolerance 1/min	: 1052
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm	: 100 : 20.25 : + 0.75
Del. quantity cm3/1000 strokes Tolerance	: 350.0
cm3/1000 strokes Check tolerance cm3/1000s.	: ← 20.0 : ← 23.0
LOW IDLE	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 7.50 : +- 0.10
Del. quantity cm3/1000 strokes	: 30.0
Tolerance cm3/1000 strokes Check tolerance	: + 2.5
cm3/1000s. Spreed	: ← 5.0
Tolerance cm3/1000 strokes Check tolerance	: 8.0
cm3/1000S.	: 11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.01.95 Test oil : ISO 4113

Combination No. : 0401846989

Injection pump

Pump designation : PE6P110A320RS3108X

EP type number : 0411816730

Governor

Governer design. : RQV250...1100PA920

: -8

Governer no. : 0421814104

Cust. part No. : 425662

: -P02 RELEASED

Customer-spec. information

Customer : VOLVO-TRUCK

Motor : THD101,102,TD102

Power KW : 197.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2417413046

Inlet press. bar : 1.5Tolerance bar : $\leftarrow 0.1$

Test nozzle holde

assembly : 0681343009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test Lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.05
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300
Tolerance : +- 0.30
Check

tolerance °NW : +- 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated 'speed rpm : 700

Rack travel in mm : 12.35
Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 166.0

Talanasas	 †		
Tolerance cm3/1000 strokes : + 1	1	control lever	1
CID/ 1000 Strokes . T	·	position degree Rated speed rpm	1175
Check tolerance	I	nated speed (pill	. 1175
cm3/1000s. : +- 3	.0 +	Rack travel in mm	: 16.50
	+	Tolerance mm	
Spreed	+		
Tolerance	+	*	
cm3/1000 strokes : 4	+0 +	FULL LOAD DELIVER	Y AT FULL LOAD STOP
Check tolerance	 †	Rated speed rpm	. 700
	.5 I	Aneroid pressure	. 700
		hPa	: 1000
	+	Del. quantity	
(B) SETTING OF INJECTION P	UMP +	cm3/1000 strokes	: 166.0
WITH GOVERNOR	+	Tolerance	
		cm3/1000 strokes	: +- 1.0
GUIDE SLEEVE TRAVEL		Check tolerance cm3/1000s.	: +- 3.0
	I	Spreed	
Rated speed rpm : 250	+	Tolerance	
guide sleeve travel mm : 1. Tolerance mm : +- 0.	+	cm3/1000 strokes	
travel mm : 1.	19 +	Check tolerance	
lolerance mm : ← U.	²⁵ †	cm3/1000S.	: 7.5
Rated speed rpm : 1176	Ī		
guide sleeve	I	RATED SPEED	
travel mm : 8.	29 🗼	101120 01220	
Tolerance mm : +- 0.1	25 🗼		
-	Ť	control lever	/= <u>-</u>
Rated speed rpm : 1090 guide sleeve	†	position degree	: 65.0
travel mm : 6.9	os I	tolerance degree	: +- 4.0
Tolerance mm : +- 0.7		control lever	
	-	position degree	: 119.0
Rated speed rpm : 387	+	tolerance degree	: + 4.0
guide sleeve	., +		44 775
travel mm : 2.5 Tolerance mm : + 0.7	†	rack travel mm Rated speed rpm	11.35
oterance min : + 0.7	Ĭ	Tolerance 1/min	: + 5
Rated speed rpm : 437	Į	TO CET CHICCE TAIRTIT	
guide sleeve	+	rack travel mm	: 4.00
travel mm : 3.7		Rated speed rpm	: 1240
Tolerance mm : + 0.7	25 +	Tolerance 1/min	: ← 15
Pated around man 4 520	†	naale Anaval am	. 0.50
Rated speed rpm : 520 guide sleeve	Í	rack travel mm Tolerance mm	: 0.50 : + 0.50
travel mm : 4.0	57 I	Rated speed rpm	: 1350
travel mm : 4.0 Tolerance mm : + 0.2	25 4	opeca (pm	
	+		
Rated speed rpm : 1370	+	LOW IDLE	
guide sleeve travel mm : 11.5			
travel mm : 11.5 Tolerance mm : + 0.5		control lever	
rocciano tim . · U.	Ĩ	position degree	: 64.0
		tolerance degree	
GUIDE SLEEVE POSITION	+	_	
	+	control lever	40.0
	+	position degree	: 12.0

tolerance degree : +- 4.0

Testing:

Rated speed rpm : 250 rack travel mm : 5.30 Tolerance mm : +0.10

Rated speed rpm : 150

CRT mm min. : > 6.30

CONTINUOUS-ACTION CONTROL

Rated speed rpm : 330

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 12.35
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 9.50
Tolerance mm : + 0.15

Rated speed rpm : 500

Pressure hPa : 760 rack travel mm : 2.50 Tolerance mm : + 0.15

Pressure hPa : 270
rack travel mm : 0.25
Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 700
Del. quantity
cm3/1000 strokes : 114.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s.

: +- 4.0

BREAKAWAY

Rack travel in mm : 11.35 Rated speed rpm : 1165 Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 9.50 Tolerance mm : + 0.15

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 27.01.95 Edition Test oil : ISO 4113

Combination No. : 0401846990

Injection pump

Pump designation : PE6P120A320RS3118

EP type number : 0411826726

Governor

Governer design. : RQV250...1100PA920

: -9

: 0421814105 Governer no.

Cust. part No. : 425663-P0? (P03)

Customer-spec. information

Customer : VOLVO-TRUCK : THD 102 KD : 250.0 Motor Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2417413046

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1688901019 assembly

Opening pressure

208.5 bar Tolerance bar : ← 1.5

Test Lines : 1680750075

Outside diameter : 8.0

E09

x inside diameter : 3.0 x length mm : 1000

REMARKS -

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 2.65 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300 : + 0.30Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 13.25 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 223.0

Tolerance cm3/1000 strokes : + 1.0	control lever
Check tolerance cm3/1000s. : +- 4.0	position degree : - 1 Rated speed rpm : 1185 Rack travel in mm : 16.50
Spreed Tolerance cm3/1000 strokes : 5.0	Tolerance mm : +- 1.30
Check tolerance cm3/1000s. : 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	hPa : 1200 Del. quantity cm3/1000 strokes : 223.0 Tolerance
GUIDE SLEEVE TRAVEL	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0
Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve	Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
travel mm : 7.80 Tolerance mm : + 0.25	RATED SPEED
Rated speed rpm : 1081 guide sleeve travel mm : 6.82 Tolerance mm : + 0.25	control lever position degree : 62.0 tolerance degree : + 4.0
Rated speed rpm : 387 guide sleeve travel mm : 2.96 Tolerance mm : + 0.25	control lever position degree : 117.0 tolerance degree : + 4.0 rack travel mm : 12.25
Rated speed rpm : 437 guide sleeve	Rated speed rpm : 1135 Tolerance 1/min : + 5
travel mm : 3.71 Tolerance mm : + 0.25 Rated speed rpm : 520	rack travel mm : 4.00 Rated speed rpm : 1225 Tolerance 1/min : + 15
guide sleeve travel mm : 4.67 Tolerance mm : + 0.25	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350
Rated speed rpm : 1370 guide sleeve travel mm : 11.50	LOW IDLE
Tolerance mm : + 0.50 GUIDE SLEEVE POSITION	control lever position degree : 64.0 tolerance degree : + 4.0
‡	control lever position degree : 9.0

tolerance degree : +- 4.0

Testing:

Rated speed rpm : 250 rack travel mm : 5.20 Tolerance mm : + 0.10

Rated speed rpm : 150

CRT mm min. : > 6.20

CONTINUOUS-ACTION CONTROL

Rated speed rpm : 310

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 13.25
Tolerance mm : ← 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 9.00
Tolerance mm : + 0.15

Rated speed rpm : 500

Pressure hPa : 850 rack travel mm : 3.70 Tolerance mm : + 0.15

Pressure hPa : 160 rack travel mm : 0.25 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 700
Del. quantity
cm3/1000 strokes : 134.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 12.25 Rated speed rpm : 1135 Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 9.00 Tolerance mm : + 0.15

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 27.01.95 : ISO 4113

Combination No. : 0401846991

Injection pump

Pump designation : PE6P110A320RS3108-1

EP type number : 0411816757

Governor

Governer design. : RQV250...1100PA920

: -10

: 0421814106 Governer no.

Cust. part No. : 425823 PO2 RELEASED

Customer-spec. information

Customer : VOLVO-TRUCK Motor : THD 102 KB : 212.0 Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2417413046

Inlet press. bar : Tolerance bar : +-0.1

Test nozzle holde

: 0681343009 assembly

Opening pressure

: 173.5 : ← 1.5 bar Tolerance bar

: 1680750089 Test lines

Outside diameter : 8.0

x inside diameter: 3.0 x length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : \leftarrow 1.0

Prestroke mm Tolerance mm

test only : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30Check

tolerance *NW : + - 0.50

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 14.30 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 191.0

Tolerance cm3/1000 strokes : +- 1.0	control lever
Check tolerance cm3/1000s. : + 3.0	position degree : - 1 Rated speed rpm : 1175
Spreed	Rack travel in mm : 16.50 Tolerance mm : + 1.30
Tolerance cm3/1000 strokes : 4.0	FILL LOAD DELTUEDY AT FILL LOAD OTOD
Check tolerance cm3/1000s. : 7.5	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700
uis/10003 /.3	Aneroid pressure hPa : 1200
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Del. quantity cm3/1000 strokes : 191.0
	Tolerance cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRAVEL	Check tolerance cm3/1000s. : +- 3.0
Rated speed rpm : 250 guide sleeve	+ Spreed + Tolerance
travel mm : 1.19 Tolerance mm : + 0.25	+ cm3/1000 strokes : 4.0 + Check tolerance
Rated speed rpm : 1146	+ cm3/1000s. : 7.5
guide sleeve travel mm : 7.81 Tolerance mm : +- 0.25	RATED SPEED
Ratted speed rpm : 1081	T control lever
guide sleeve	position degree : 63.0 tolerance degree : + 4.0
Tolerance mm : + 0.25	+ control lever
Rated speed rpm : 387 guide sleeve	position degree : 120.0 tolerance degree : + 4.0
travel mm : 2.96 Tolerance mm : + 0.25	rack travel mm : 13.30
Rated speed rpm : 437	Rated speed rpm : 1135 Tolerance 1/min : + 5
guide sleeve travel mm : 3.71 Tolerance mm : + 0.25	rack travel mm : 4.00 Rated speed rpm : 1240
Rated speed rpm : 520	Tolerance 1/min : + 15
guide sleeve : 4.67	rack travel mm : 0.50 Tolerance mm : + 0.50
Tolerance mm : + 0.25	Rated speed rpm : 1350
Rated speed rpm : 1370 guide sleeve	LOW IDLE
travel mm : 11.50 Tolerance mm : + 0.50	t control lever
GUIDE SLEEVE POSITION	position degree : 66.0 tolerance degree : + 4.0
	control lever
	+ position degree : 11.0

tolerance degree : +- 4.0

Testing:

Rated speed rpm : 250 rack travel mm : 5.70 Tolerance mm : + 0.10

Rated speed rpm : 150

CRT mm min. : > 6.70

CONTINUOUS-ACTION CONTROL

Rated speed rpm : 330

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 14.30
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 10.15
Tolerance mm : + 0.15

Rated speed rpm : 500

Pressure hPa : 980 rack travel mm : 3.80 Tolerance mm : + 0.15

Pressure hPa : 240 rack travel mm : 0.25 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 700 Del. quantity

cm3/1000 strokes : 113.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.

: **←** 4.0

BREAKAWAY

Rack travel in mm : 13.30
Rated speed rpm : 1135
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.15 Tolerance mm : + 0.15

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26.01.95 : ISO 4113 Test oil

Combination No. : 0402646650

Injection pump

Pump designation: PE6P130A720RS7354

EP type number : 0412636835

Governor

Governer design. : RQV300...950PA1002

: -2K

: 0421815434 Governer no.

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE

: 8210.42.4000 Motor

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar

Test nozzle holde

: 1688901105 assembly

Opening pressure

bar Tolerance bar : +- 1.5

Test lines : 1680750075

Outside diameter : 8.0 x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : \leftarrow 1.0

Prestroke mm 5.05 Tolerance mm

test only : + 0.10

Rack travel in mm: 13.00 Tolerance mm : \leftarrow 0.50

: 1-5- 3- 6- 2-: 4 Firing order

: 0-60-120-180-240 Phasing

: -300 Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : S.o.d. blocking

Barrel no.

BASIC SETTING

950 Rated speed rpm :

Rack travel in mm: 13.05 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 277.0

Tolerance	<u> </u>	Tolerance mm : +- 0.50
cm3/1000 strokes	: ← 1.0 <u> </u>	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: + 4.0	
Spreed Tolerance	<u> </u>	control lever position degree : - 1 Rated speed rpm : 1195
cm3/1000 strokes	: 5.0	Rack travel in mm : 12.00
Check tolerance cm3/1000s.	: 9.0	Tolerance mm : + 1.30
2nd speed rpm	: 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in m		Rated speed rpm : 950
Tolerance mm Del. quantity	: + 0.20	Aneroid pressure hPa : 900
cm3/1000 strokes	: 22.0	Del. quantity
Tolerance cm3/1000 strokes	+ 30	cm3/1000 strokes : 277.0
Check tolerance	: 7 3.0	Tolerance cm3/1000 strokes : +- 1.0
cm3/1000s.	: +- 6.0 +	Check tolerance
Spreed Tolerance	†	cm3/1000s. : +- 4.0 Spreed
cm3/1000 strokes	: 8.0 I	Tolerance
Check tolerance	+	cm3/1000 strokes : 5.0
cm3/1000s.	: 12.0	Check tolerance cm3/1000s. : 9.0
(D) CETTING OF TH	115057011 0 100	
(B) SETTING OF IN	MECITON PUMP	RATED SPEED
	+	
GUIDE SLEEVE TRAN	/EL ‡	control lever
Rated speed rpm guide sleeve	: 300	position degree : 115.0 tolerance degree : +- 4.0
travel mm	: 1.14	rack travel mm : 12.00
Tolerance mm	: + 0.20 +	Rated speed rpm : 995 Tolerance 1/min : +- 5
Rated speed rpm	: 1006	
guide steeve	+	rack travel mm : 4.00
travel mm Tolerance mm	. 0./0	0-4-4
TOCCI GITOC VIZIS	: ← 8.60 : ← 0.15	Rated speed rpm : 1110 Tolerance 1/min : + 15
Rated speed rpm	: 8.60 : + 0.15 : 765	Tolerance 1/min : + 15 rack travel mm : 0.50
Rated speed rpm guide sleeve travel mm	: 8.60 : + 0.15 : 765 : 6.13	Tolerance 1/min : + 15
Rated speed rpm guide sleeve	: + 0.15 : 765	Tolerance 1/min : ← 15 rack travel mm : 0.50 Tolerance mm : ← 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: 8.60 : + 0.15 : 765 : 6.13 : + 0.25 : 520	Tolerance 1/min : ← 15 rack travel mm : 0.50 Tolerance mm : ← 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: + 0.15 : 765 : 6.13 : + 0.25 : 520 : 3.78	Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1300 LOW IDLE
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: + 0.15 : 765 : 6.13 : + 0.25 : 520	Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1300 LOW IDLE control lever
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: + 0.15 : 765 : 6.13 : + 0.25 : 520 : 3.78 : + 0.25	Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1300 LOW IDLE

		+ Check
Rated speed rpm	: 300	
rack travel mm	: 4.20	+ speed 1/min :> 200 + Rated speed rpm : < 220
rack travel mm Tolerance mm	: +- 0.10	+ Check
		speed 1/min : < 240
rack travel mm	:> 2.00	5500 Trilling
rack travel mm Rated speed rpm Tolerance 1/min	370	
Tolerance 1/min	· +- 20	FUEL DELIVERY CHARACTERISTICS
		TOLL DELIVERY CHARACTERISTICS
Rated speed rpm	: 200	Aneroid pressure
	7 233	+ hPa : 900
CRT mm min.	: > 5.70	hPa : 900 Rated speed rpm : 550
		+ Del quantity
		Del. quantity cm3/1000 strokes : 292.0
TORQUE CONTROL		+ Tolerance
		+ cm3/1000 strokes : + 3.0
Rated speed rpm rack travel mm Tolerance mm	: 950	+ Check tolerance
rack travel mm	: 13.05	+ cm3/1000s. : $+$ 6.0
rack travel mm Tolerance mm	: + 0.05	
		Aneroid pressure
Rated speed rpm rack travel mm Tolerance mm	: 700	∔ hPa : -
rack travel mm	: 12.80	+ Rated speed rpm : 550
Tolerance mm	: + 0.10	+ Del. quantity
		Del. quantity cm3/1000 strokes : 178.0
Rated speed rpm rack travel mm Tolerance mm	: 550	+ Tolerance
rack travel mm	: 12.10	+ cm3/1000 strokes : $+$ 1.0
Tolerance mm	: ← 0.10	+ Check tolerance
		+ cm3/1000s. : +- 4.0
Rated speed rpm rack travel mm	: 300	+
rack travel mm	: 11.60	+
Tolerance mm	· +- 0 30	+ BREAKAWAY
rocci ca loc liali	0.55	■ ************************************
rocer arice hair	0.33	+
		_ ‡
ANEROID/ALTITUDE		- + Rack travel in mm : 12.00
		- Rack travel in mm : 12.00
ANEROID/ALTITUDE		- + Rack travel in mm : 12.00
ANEROID/ALTITUDE COMPENSATOR TEST		- Rack travel in mm: 12.00
ANEROID/ALTITUDE		- Rack travel in mm: 12.00
ANEROID/ALTITUDE COMPENSATOR TEST SETTING		Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm	: <i>9</i> 50	- Rack travel in mm : 12.00
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm	: <i>9</i> 50	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm	: 950 : 900 : 13.05	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm	: 950 : 900 : 13.05	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 950 : 900 : 13.05	Rack travel in mm: 12.00 Rated speed rpm: 995 Tolerance 1/min: + 5 STARTING FUEL DELIVERY Rated speed rpm: 100 Del. quantity cm3/1000 strokes: 155.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm	: 950 : 900 : 13.05	Rack travel in mm: 12.00 Rated speed rpm: 995 Tolerance 1/min: + 5 STARTING FUEL DELIVERY Rated speed rpm: 100 Del. quantity cm3/1000 strokes: 155.0 Tolerance
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT	: 950 : 900 : 13.05 : ← 0.05	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 950 : 900 : 13.05 : ← 0.05	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Rated speed rpm	: 950 : 900 : 13.05 : ← 0.05	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa	: 950 : 900 : 13.05 : ← 0.05 : 950 : 320	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm	: 950 : 900 : 13.05 : ← 0.05 : 950 : 320 : 9.90	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa	: 950 : 900 : 13.05 : ← 0.05 : 950 : 320 : 9.90	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 950 : 900 : 13.05 : ← 0.05 : 950 : 320 : 9.90 : ← 0.20	Rack travel in mm: 12.00 Rated speed rpm: 995 Tolerance 1/min: + 5 STARTING FUEL DELIVERY Rated speed rpm: 100 Del. quantity cm3/1000 strokes: 155.0 Tolerance cm3/1000 strokes: + 15.0 Check tolerance cm3/1000S. : + 19.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 950 : 900 : 13.05 : ← 0.05 : 950 : 320 : 9.90 : ← 0.20 : 610	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 950 : 900 : 13.05 : ← 0.05 : 950 : 9.90 : ← 0.20 : 610 : 12.15	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 950 : 900 : 13.05 : ← 0.05 : 950 : 9.90 : ← 0.20 : 610 : 12.15	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 300
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 950 : 900 : 13.05 : ← 0.05 : 950 : 9.90 : ← 0.20 : 610 : 12.15	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.70
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 950 : 900 : 13.05 : ← 0.05 : 950 : 9.90 : ← 0.20 : 610 : 12.15	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.70 Tolerance mm : + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 950 : 900 : 13.05 : ← 0.05 : 950 : 9.90 : ← 0.20 : 610 : 12.15	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.70 Tolerance mm : + 0.20 Del. quantity
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 950 : 900 : 13.05 : ← 0.05 : 950 : 320 : 9.90 : ← 0.20 : 610 : 12.15 : ← 0.05	Rack travel in mm : 12.00 Rated speed rpm : 995 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.70 Tolerance mm : + 0.20

Tolerance cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s. Spreed	: +-	6.0
Tolerance cm3/1000 strokes	•	8.0
Check tolerance	•	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 01.02.95 : ISO 4113

Combination No. : 0402646657

Injection pump

Pump designation : PE6P130A320RS7368

EP type number : 0412636836

Governor

Governer design. : RQV250...1125PA1210K

Governer no. : 0421815460

Cust. part No.

: 866737

: -P02 new value

Customer-spec. information : PENTA

Customer Motor

: TAMD 122 P

Power KW

: 426.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 2417413077

Inlet press. bar :

Tolerance bar

: + 0.1

Test nozzle holde

assembly

: 1688901105

Opening pressure

bar

208.5

Tolerance bar

1.5

Test lines

: 1680750015

Outside diameter :

8.0

E19

x inside diameter : 3.0 600 x length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 4.45 : + 0.05Tolerance mm

: + 0.10test only

Rack travel in mm : 6.20 Tolerance mm : + 0.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance Check

: + 0.30

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm : 1125

Rack travel in mm: 11.50 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes :

318.0

	l mulida al cassa
Talanana	† guide sleeve
Tolerance cm3/1000 strokes : + 1.5	+ travel mm : 3.90 + Tolerance mm : + 0.25
	-
Check tolerance cm3/1000s. : +- 5.0	Rated speed rpm : 1320 guide sleeve
Cib/ 10005	+ travel mm : 13.50
Spreed	T travet mm : 13.30
	+ Tolerance mm : +- 0.50
Tolerance	†
cm3/1000 strokes : 7.0	
	+ GUIDE SLEEVE POSITION
Check tolerance	+
cm3/1000s. : 11.0	+
	+ control lever
Del. quantity	→ position degree : -1
cm3/1000 strokes : 25.0	Rated speed rpm : 1200
Tolerance	The construction of the co
cm3/1000 strokes : + 3.0	Rack travel in mm: 10.50
Check tolerance	Tolerance mm : +- 1.20
cm3/1000s. : +- 6.0	T Total date min : T 1.20
	Ť
Spreed	THE LOSS STITUTES AT THE LOSS STOP
Tolerance	+ FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 7.0	†
Check tolerance	+ Rated speed rpm : 1125
cm3/1000s. : 11.0	+ Aneroid pressure
	+ hPa : 2000
	+ Del. quantity
(B) SETTING OF INJECTION PUMP	+ cm3/1000 strokes : 318.0
WITH GOVERNOR	+ Tolerance
	+ cm3/1000 strokes · + 1.5
	+ cm3/1000 strokes : + 1.5
GUIDE SLEEVE TRAVEL	
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 300	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance
Rated speed rpm : 300 guide sleeve	Check tolerance
Rated speed rpm : 300 guide sleeve travel mm : 1.93	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance
Rated speed rpm : 300 guide sleeve	Check tolerance
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : +- 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : +- 0.25	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : +- 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : +- 0.25	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve travel mm : 7.14	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0 control lever
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0 control lever position degree : 122.0
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25 Rated speed rpm : 325	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0 control lever
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25 Rated speed rpm : 325 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0 control lever position degree : 122.0 tolerance degree : + 4.0
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25 Rated speed rpm : 325 guide sleeve travel mm : 2.31	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0 control lever position degree : 122.0 tolerance degree : + 4.0 rack travel mm : 10.50
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25 Rated speed rpm : 325 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0 control lever position degree : 122.0 tolerance degree : + 4.0 rack travel mm : 10.50 Rated speed rpm : 1165
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25 Rated speed rpm : 325 guide sleeve travel mm : 2.31 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0 control lever position degree : 122.0 tolerance degree : + 4.0 rack travel mm : 10.50
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25 Rated speed rpm : 325 guide sleeve travel mm : 2.31 Tolerance mm : + 0.25 Rated speed rpm : 2.31 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0 control lever position degree : 122.0 tolerance degree : + 4.0 rack travel mm : 10.50 Rated speed rpm : 1165 Tolerance 1/min : + 5
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25 Rated speed rpm : 325 guide sleeve travel mm : 2.31 Tolerance mm : + 0.25 Rated speed rpm : 2.31 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0 control lever position degree : 122.0 tolerance degree : + 4.0 rack travel mm : 10.50 Rated speed rpm : 1165 Tolerance 1/min : + 5 rack travel mm : 4.00
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25 Rated speed rpm : 325 guide sleeve travel mm : 2.31 Tolerance mm : + 0.25 Rated speed rpm : 375 guide sleeve travel mm : 2.36 Rated speed rpm : 375 guide sleeve travel mm : 2.96	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0 control lever position degree : 122.0 tolerance degree : + 4.0 rack travel mm : 10.50 Rated speed rpm : 1165 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1235
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25 Rated speed rpm : 325 guide sleeve travel mm : 2.31 Tolerance mm : + 0.25 Rated speed rpm : 2.31 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0 control lever position degree : 122.0 tolerance degree : + 4.0 rack travel mm : 10.50 Rated speed rpm : 1165 Tolerance 1/min : + 5 rack travel mm : 4.00
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25 Rated speed rpm : 325 guide sleeve travel mm : 2.31 Tolerance mm : + 0.25 Rated speed rpm : 375 guide sleeve travel mm : 2.36 Rated speed rpm : 375 guide sleeve travel mm : 2.96	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0 control lever position degree : 122.0 tolerance degree : + 4.0 rack travel mm : 10.50 Rated speed rpm : 1165 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1235
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25 Rated speed rpm : 325 guide sleeve travel mm : 2.31 Tolerance mm : + 0.25 Rated speed rpm : 375 guide sleeve travel mm : 2.96 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0 control lever position degree : 122.0 tolerance degree : + 4.0 rack travel mm : 10.50 Rated speed rpm : 1165 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : + 15
Rated speed rpm : 300 guide sleeve travel mm : 1.93 Tolerance mm : + 0.25 Rated speed rpm : 1157 guide sleeve travel mm : 11.17 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve travel mm : 7.14 Tolerance mm : + 0.25 Rated speed rpm : 325 guide sleeve travel mm : 2.31 Tolerance mm : + 0.25 Rated speed rpm : 375 guide sleeve travel mm : 2.96 Tolerance mm : 2.96 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0 RATED SPEED control lever position degree : 70.0 tolerance degree : + 4.0 control lever position degree : 122.0 tolerance degree : + 4.0 rack travel mm : 10.50 Rated speed rpm : 1165 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1235

Rated speed rpm : 1300	rack travel mm : 6.20 Tolerance mm : + 0.10
LOW IDLE	Rated speed rpm : 1125
control lever position degree : 68.0 tolerance degree : + 4.0	Pressure hPa : 1500 rack travel mm : 4.90 Tolerance mm : + 0.10 Pressure hPa : 290
control lever position degree : 16.0 tolerance degree : + 4.0	Pressure hPa : 290 rack travel mm : 0.25 Tolerance mm : + 0.05
Testing:	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 260 rack travel mm : 4.50 Tolerance mm : + 0.20 Rated speed rpm : 200 CRT mm min. : > 5.60	Aneroid pressure hPa : 2000 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 321.0 Tolerance
CONTINUOUS-ACTION CONTROL	cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0
+	
Rated speed rpm : 330 TORQUE CONTROL	Aneroid pressure hPa : 2000 Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 284.0
Rated speed rpm : 1125 rack travel mm : 11.50 Tolerance mm : + 0.05	cm3/1000 strokes : 284.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0
Rated speed rpm : 700 rack travel mm : 10.60 rolerance mm : + 0.15	Aneroid pressure hPa : - Rated speed rpm : 500
Rated speed rpm : 500 + rack travel mm : 9.20 + Tolerance mm : + 0.10 +	Del. quantity cm3/1000 strokes : 163.0 Tolerance
ANEROID/ALTITUDE COMPENSATOR TEST	cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 5.0
SETTING	BREAKAWAY
Rated speed rpm : 1125 Pressure hPa : 2000 rack travel mm : 11.50 Tolerance mm : + 0.05	Rack travel in mm : 10.50 Rated speed rpm : 1165 Tolerance 1/min : +- 5
MEASUREMENT Pressure hPa : - Rated speed rpm : 500	STARTING FUEL DELIVERY

Tolerance cm3/1000 strokes : +- 20.0

Check tolerance cm3/1000s. : +- 25.0

LOW IDLE

Del. quantity cm3/1000 strokes : 25.0

Tolerance

cm3/1000 strokes : +-Check tolerance cm3/1000s. : +-3.0

6.0

Spreed

Tolerance 7.0

cm3/1000 strokes : Check tolerance cm3/1000s. : 11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.01.95 Test oil : ISO 4113

Combination No. : 0402646760

Injection pump

Pump designation : PE6P120A320LS7834

: -10

EP type number : 0412626853

Governor

Governer design. : RQ300/1050PA1030-23

Governer no. : 0421801769

Cust. part No. : 0260743502

Customer—spec. information Customer : MB-NFZ

Motor : 0M401 LA Power KW : 230.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance L/h: +- 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.55
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 6-3-5-2-4-

: 1-

Phasing : 0-60-120-180-240

: -300-360 Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm : 14.80

Tolonous many to 0.05	1
Tolerance mm : + 0.05	+ Rated speed rpm : 421
Del. quantity	guide sleeve
cm3/1000 strokes : 230.0	travel mm : 4.03
Tolerance	
cm3/1000 strokes : +- 1.0	Rated speed rpm : 550
	- guide sleeve
Check tolerance	+ travel mm : 6.00
cm3/1000s. : +- 4.0	Tolerance mm : +- 0.10
Spreed	Rated speed rpm : 1270
Tolerance	- guide sleeve
cm3/1000 strokes : 5.0	+ travel mm : 11.50
Check tolerance	+ Tolerance mm : +- 0.50
cm3/1000s. : 9.0	Rated speed rpm : 893
	+ guide sleeve
2nd speed rpm : 300	+ travel mm : 6.26
Onele travel in my c / 70	+ Tolerance mm : + 0.10
Rack travel in mm : 6.30 Tolerance mm : +- 0.30	
Del. quantity	GUIDE SLEEVE POSITION
cm3/1000 strokes : 13.0	-
Tolerance	Rated speed rpm : 600
cm3/1000 strokes : + 3.0	Pools travel do an a 20.00
Check tolerance cm3/1000S. : +- 6.0	+ Rack travel in mm : 20.00 + Tolerance mm : + 0.80
Spreed	Total de lilli
Tolerance	
cm3/1000 strokes : 6.0	FULL LOAD DELIVERY AT FULL LOAD STO
Check tolerance cm3/1000s. : 10.0	Rated speed rpm : 550
Ch5/ 10003 10.0	+ Rated speed rpm : 550 - Aneroid pressure
	+ hPa : 1000
(B) SETTING OF INJECTION PUMP	+ Del. quantity
WITH GOVERNOR	+ cm3/1000 strokes : 230.0
	Tolerance : + 1.0
GUIDE SLEEVE TRAVEL	+ Check tolerance
	+ cm3/1000s. : + 4.0
Rated speed rpm : 300	Spreed
guide sleeve	Tolerance
travel mm : 1.82 Tolerance mm : + 0.10	+ cm3/1000 strokes : 5.0 + Check tolerance
TO COLUMN TO U. TU	+ cm3/1000s. : 9.0
Rated speed rpm : 1104	+
guide sleeve	
travel mm : 6.68 Tolerance mm : + 0.10	RATED SPEED
TO CET OF ICE IIIII . TO U. (U	I
Rated speed rpm : 1050	T control lever
guide sleeve	position degree : 100.0
travel mm : 6.35	tolerance degree : + 4.0
Tolerance mm : +- 0.10	17 00 A7 00
Rated speed rpm : 832	rack travel mm : 13.80 Rated speed rpm : 1098
guide sleeve	+ Tolerance 1/min : + 8
travel mm : 6.09	1020.00.00
Tolerance mm : + 0.10	rack travel mm : 4.00

Rated speed rpm : 1195 Tolerance 1/min : + 15	rack travel mm : 10.80 Tolerance mm : +- 0.15
rack travel mm : 0.75 Tolerance mm : + 0.75	Rated speed rpm : 400
Rated speed rpm : 1300	Pressure hPa : 400 rack travel mm : 12.90 Tolerance mm : +- 0.20
LOW IDLE	
control lever position degree : 74.0 tolerance degree : + 4.0	Pressure hPa : 600 rack travel mm : 14.15 Tolerance mm : + 0.20
Testing:	START CUT-OUT
Rated speed rpm : 300	Rated speed rpm : > 100 Check
rack travel mm : 5.20	speed 1/min : > 80
 	Rated speed rpm : < 220 Check
rack travel mm : 2.00 + Rated speed rpm : 405 +	speed 1/min : < 240
Tolerance 1/min : +- 20	FIRE API TUENY CHARACTERIOTEC
Rated speed rpm : 200	FUEL DELIVERY CHARACTERISTICS
CRT mm min. : > 7.00	Aneroid pressure hPa : 1000
T	Rated speed rpm : 1050
TORQUE CONTROL	Del. quantity cm3/1000 strokes : 229.0
+	Tolerance
Rated speed rpm : 550 + rack travel mm : 14.80 +	cm3/1000 strokes : +- 3.0 Check tolerance
rack travel mm : 14.80 Tolerance mm : + 0.05	cm3/1000s. : +- 6.0
Rated speed rpm : 1050	Spreed Tolerance
rack travel mm : 14.80 +	cm3/1000 strokes : 8.0
Tolerance mm : + 0.10	Check tolerance cm3/1000s. : 12.0
Rated speed rpm : 700 + rack travel mm : 14.80 +	
Tolerance mm : +- 0.05	Aneroid pressure hPa : -
+	Rated speed rpm : 500
ANEROID/ALTITUDE	Del. quantity cm3/1000 strokes : 134.0
COMPENSATOR TEST	Tolerance cm3/1000 strokes : +- 1.0
SETTING	Check tolerance cm3/1000S. : +- 4.0
Rated speed rpm : 400 +	Spreed Tolerance
Pressure hPa : 1000	cm3/1000 strokes : 8.0
rack travel mm : 14.80 + Tolerance mm : + 0.05 +	Check tolerance cm3/1000S. : 12.0
MEASUREMENT	
+	BREAKAWAY
Pressure hPa : - + + + + + + + + + + + + + + + + + +	

Rack travel in mm: 13.80 Rated speed rpm : 1098 Tolerance 1/min : ←

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0 Check tolerance

cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm 300 6.30 rack travel mm 0.30 Tolerance mm

Del. quantity cm3/1000 strokes : 13.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. 6.0

Spreed Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 27.01.95 Edition : ISO 4113 Test oil

Combination No. : 0402646761

Injection pump

Pump designation : PE6P120A320LS7834

: -10

EP type number : 0412626853

Governor

Governer design. : RQ300/1050PA1031-19

: 0421801768 Governer no.

Cust. part No. : 0260743802

Customer-spec. information Customer : MB-NFZ : 0M401 LA Motor Power KW : 230.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413047

Inlet press. bar : Tolerance bar : +-0.1

Tolerance l/h: + 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 Tolerance bar

Lube oil : 1409918004 Test lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3 x length mm : 1000 3.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 5.55 Tolerance mm

test only : + 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

: 6-3-5-2-4-Firing order

: 1-

Phasing : 0-60-120-180-240

: -300-360 Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm: 14.80

Tolerance mm : +- 0.05	+
	Rated speed rpm : 421
Del. quantity cm3/1000 strokes : 230.0	guide sleeve : 4.03
	+ Tolerance mm : +- 0.10
Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 550
	+ guide sleeve
Check tolerance cm3/1000s. : ← 4.0	+ travel mm : 6.00 + Tolerance mm : + 0.10
LIB/10005 1- 4.0	+ Toterance min : + 0.10
Spreed	+ Rated speed rpm : 1270
Tolerance cm3/1000 strokes : 5.0	+ guide sleeve + travel mm : 11.50
	+ Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : 9.0	+ + Rated speed rpm : 893
CID/10003 /.0	guide sleeve
2nd speed rpm : 300	+ travel mm : 6.26
0	Tolerance mm : + 0.10
Rack travel in mm : 6.30 Tolerance mm : + 0.30	İ
Del. quantity	GUIDE SLEEVE POSITION
cm3/1000 strokes : 13.0	
Tolerance 7.0	+ Rated speed rpm : 600
cm3/1000 strokes : + 3.0 Check tolerance	# Rack travel in mm : 20.00
cm3/1000s. : +- 6.0	† Tolerance mm : + 0.80
Spreed	+
Tolerance	ISHA LOAD DELTHEDY AT ENLL LOAD OTOD
cm3/1000 strokes : 6.0 Check tolerance	+ FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : 10.0	+ Ruted speed rpm : 550
	+ Aneroid pressure
(B) SETTING OF INJECTION PUMP	+ hPa : 1000 + Del. quantity
WITH GOVERNOR	cm3/1000 strokes : 230.0
	+ Tolerance
CUTATION FOR TONIE	+ cm3/1000 strokes : + 1.0
GUIDE SLEEVE TRAVEL	+ Check tolerance + cm3/1000S. : +- 4.0
Rated speed rpm : 300	Spreed : 1 4.0
guide sleeve	† Tolerance
travel mm : 1.82 Tolerance mm : + 0.10	+ cm3/1000 strokes : 5.0 + Check tolerance
Tolerance mm : +- 0.10	+ cm3/1000s. : 9.0
Rated speed rpm : 1104	+
guide sleeve	DATED OPEN
travel mm : 6.68 Tolerance mm : + 0.10	† RATED SPEED
	+
Rated speed rpm : 1050	+ control lever
guide sleeve travel mm : 6.35	+ position degree : 99.0 + tolerance degree : + 4.0
Tolerance mm : + 0.10	+ Cotter ance degree . 1- 4.0
	rack travel mm : 13.80
Rated speed rpm : 832	+ Rated speed rpm : 1098
guide sleeve	+ Tolerance 1/min : + 8
travel mm · 6(19	
travel mm : 6.09 Tolerance mm : + 0.10	rack travel mm : 4.00

Rated speed rpm : 1195 Tolerance 1/min : + 15	rack travel mm : 10.80 Tolerance mm : +- 0.15
rack travel mm : 0.75 Tolerance mm : + 0.75	Rated speed rpm : 400
Rated speed rpm : 1300	Pressure hPa : 400 rack travel mm : 12.90 Tolerance mm : +- 0.20
LOW IDLE	
control lever + 69.0 + tolerance degree : + 4.0 +	Pressure hPa : 600 rack travel mm : 14.15 Tolerance mm : +- 0.20
Testing:	START CUT-OUT
Rated speed rom : 300	Rated speed rpm : > 100 Check
rack travel mm : 3.50 Tolerance mm : + 0.10	speed 1/min : > 80 Rated speed rpm : < 220 Check
rack travel mm : 2.00 + Rated speed rpm : 350 + Tolerance 1/min : + 20 +	speed 1/min : < 240
Tolerance 1/min : +- 20	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 200	
CRT mm min. : > 5.30	Aneroid pressure hPa : 1000 Rated speed rpm : 1050
TORQUE CONTROL	Del. quantity cm3/1000 strokes : 229.0
Rated speed rpm : 550 + rack travel mm : 14.80 +	Tolerance cm3/1000 strokes : +- 3.0 Check tolerance
Tolerance mm : +- 0.05	cm3/1000s. : +- 6.0 Spreed
Rated speed rpm : 1050 rack travel mm : 14.80 Tolerance mm : + 0.10	Tolerance cm3/1000 strokes : 8.0 Check tolerance
+	cm3/1000s. : 12.0
Rated speed rpm : 700 + rack travel mm : 14.80 + Tolerance mm : + 0.05	Aneroid pressure hPa : -
Total and a min	Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST	Del. quantity cm3/1000 strokes : 134.0 Tolerance
1	cm3/1000 strokes : +- 1.0 Check tolerance
SETTING	cm3/1000s. : +- 4.0 Spreed
Rated speed rpm : 400 Pressure hPa : 1000	Tolerance cm3/1000 strokes : 8.0
Pressure hPa : 1000 + rack travel mm : 14.80 + Tolerance mm : + 0.05	Check tolerance cm3/1000S. : 12.0
MEASUREMENT	BREAKAWAY
Pressure hPa : - Rated speed rpm : 400	607 1 602 N V 1977 1 1

F01

Rack travel in mm : 13.80
Rated speed rpm : 1098
Tolerance 1/min : + 8

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 300 rack travel mm : 6.30 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed

Tolerance

cm3/1000 strokes : Check tolerance

Check tolerance cm3/1000S. :

10.0

6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.01.95 Test oil : ISO 4113

Combination No. : 0402646762

Injection pump

Pump designation : PE6P120A320LS7834

: -10

EP type number : 0412626853

Governor

Governer design. : RQV300...1050PA1033

: -18

Governer no. : 0421814136

Cust. part No. : 0260743602

Customer—spec. information Customer : MB-NFZ Motor : OM401 LA Power KW : 230.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Tolerance l/h: \leftarrow 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 5.55 Tolerance mm : ← 0.05

test only : \leftarrow 0.10

 $\begin{array}{lll} \text{Rack travel in mm} : & 20.50 \\ \text{Tolerance mm} & : & \leftarrow 0.50 \\ \end{array}$

Firing order : 6-3-5-2-4-

: 1-

Phasing : 0-60-120-180-240

: -300-360 Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 550

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7.00	guide sleeve
Rack travel in mm: 14.80	travel mm : 5.03
Tolerance mm : + 0.05	Tolerance mm : +- 0.25
No.1 augustitus	Rated speed rpm : 820
Del. quantity + cm3/1000 strokes : 230.0 +	
dib/tuou strokes : 250.0	guide sleeve travel mm : 6.13
Tolerance	Tolerance mm : + 0.25
cm3/1000 strokes : + 1.0	roterance IIIII : + 0.25
T T	Rated speed rpm : 1183
Check tolerance	guide sleeve
cm3/1000s. : +- 4.0	travel mm : 10.00
T 4.0	Tolerance mm : + 0.25
Spreed	rocci di ice nin
Tolerance	Rated speed rpm : 1280
cm3/1000 strokes : 5.0	guide sleeve
J. J. J. J. J. J. J. J. J. J. J. J. J. J	travel mm : 11.50
Check tolerance	Tolerance mm : + 0.50
cm3/1000s. : 9.0	
. , , ,	
2nd speed rpm : 300	GUIDE SLEEVE POSITION
+	
Rack travel in mm: 6.30	
Tolerance mm : + 0.30 +	control lever
Del. quantity	position degree : -1
cm3/1000 strokes : 13.0 +	Rated speed rpm : 1145
Tolerance	
cm3/1000 strokes : + 3.0 +	Rack travel in mm : 13.80
Check tolerance	Tolerance mm : + 1.30
cm3/1000s. : + 6.0 +	
Spreed	FIRE LOSS SELTMENT AT FULL LOSS STOR
Tolerance + cm3/1000 strokes : 6.0 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	Rated speed rpm : 550
cm3/1000s. : 10.0	Rated speed rpm : 550 Aneroid pressure
T	hPa : 1000
1	Del. quantity
(B) SETTING OF INJECTION PUMP	cm3/1000 strokes : 230.0
WITH GOVERNOR	Tolerance
	cm3/1000 strokes : +- 1.0
	Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000s. : + 4.0
	Spreed
Datad aread area	
Rated speed rpm : 300 +	Tolerance
	Tolerance
guide sleeve	Tolerance cm3/1000 strokes : 5.0
guide sleeve	Tolerance
guide sleeve travel mm : 1.29 Tolerance mm : + 0.20	Tolerance cm3/1000 strokes : 5.0 Check tolerance
guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1108	Tolerance cm3/1000 strokes : 5.0 Check tolerance
guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1108 guide sleeve	Tolerance cm3/1000 strokes : 5.0 Check tolerance
guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1108 guide sleeve travel mm : 8.53	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0
guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1108 guide sleeve	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 RATED SPEED
guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1108 guide sleeve travel mm : 8.53 Tolerance mm : + 0.15	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever
guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1108 guide sleeve travel mm : 8.53 Tolerance mm : + 0.15 Rated speed rpm : 558	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0
guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1108 guide sleeve travel mm : 8.53 Tolerance mm : + 0.15 Rated speed rpm : 558 guide sleeve	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever
guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1108 guide sleeve travel mm : 8.53 Tolerance mm : + 0.15 Rated speed rpm : 558 guide sleeve travel mm : 4.53	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : 4.0
guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1108 guide sleeve travel mm : 8.53 Tolerance mm : + 0.15 Rated speed rpm : 558 guide sleeve	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 13.80
guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1108 guide sleeve travel mm : 8.53 Tolerance mm : + 0.15 Rated speed rpm : 558 guide sleeve travel mm : 4.53 Tolerance mm : + 0.25	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 13.80 Rated speed rpm : 1095
guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1108 guide sleeve travel mm : 8.53 Tolerance mm : + 0.15 Rated speed rpm : 558 guide sleeve travel mm : 4.53	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 13.80
guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1108 guide sleeve travel mm : 8.53 Tolerance mm : + 0.15 Rated speed rpm : 558 guide sleeve travel mm : 4.53 Tolerance mm : + 0.25	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 13.80 Rated speed rpm : 1095

rack travel mm : 4.00 Rated speed rpm : 1195 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1300 LOW IDLE	Pressure hPa :
control lever position degree : 66.0 tolerance degree : + 4.0	Pressure hPa : 600 - rack travel mm : 14.15 - Tolerance mm : + 0.20
Testing:	START CUT-OUT
Rated speed rpm : 300 rack travel mm : 5.20 Tolerance mm : + 0.10 Rated speed rpm : 200 CRT mm min. : > 7.00	Rated speed rpm : > 100 Check speed 1/min : > 80 Rated speed rpm : < 220 Check speed 1/min : < 240
	FUEL DELIVERY CHARACTERISTICS
CONTINUOUS-ACTION CONTROL	· Aneroid pressure
Rated speed rpm : 350	· hPa : 1000 · Rated speed rpm : 1050
TORQUE CONTROL	Del. quantity cm3/1000 strokes : 229.0
Rated speed rpm : 550 rack travel mm : 14.80 Tolerance mm : + 0.05	Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed
Rated speed rpm : 1050 rack travel mm : 14.80 Tolerance mm : +- 0.10	Tolerance : 8.0 Check tolerance cm3/1000s. : 12.0
Rated speed rpm : 700 rack travel mm : 14.80 Tolerance mm : + 0.05	Aneroid pressure hPa : - Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST	Del. quantity cm3/1000 strokes : 134.0 Tolerance
SETTING	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 4.0
Rated speed rpm : 400 Pressure hPa : 1000 rack travel mm : 14.80 Tolerance mm : + 0.05	Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0
MEASUREMENT	BREAKAWAY

Rack travel in mm : 13.80
Rated speed rpm : 1095
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strckes : 210.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm 300 6.30 rack travel mm 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.01.95 Test oil : ISO 4113

Combination No. : 0402646763

Injection pump

Pump designation : PE6P120A320LS7834

: -10

EP type number : 0412626853

Governor

Governer design. : RQV300...1050PA1065

: -2

Governer no. : 0421814135

Cust. part No. : 0260743702

Customer—spec. information
Customer : MB-NFZ
Motor : 0M401 LA
Power KW : 230.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: \leftarrow 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

F07

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.55 Tolerance mm : + 0.05

test only : +- 0.10

 $\begin{array}{lll} \text{Rack travel in mm} : & 20.50 \\ \text{Tolerance mm} & : & \leftarrow 0.50 \\ \end{array}$

Firing order : 6-3-5-2-4-

: 1

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 550

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Pools Americal for many 47, 90	guide sleeve
Rack travel in mm: 14.80	travel mm : 2.49
Tolerance mm : \leftarrow 0.05 $+$	Tolerance mm : +- 0.25
	200
Del. quantity	Rated speed rpm : 750
cm3/1000 strokes : 230.0 +	guide sleeve
	travel mm : 4.87
Tolerance	Tolerance mm : +- 0.25
$cm3/1000$ strokes : \leftarrow 1.0 $+$	The state of the s
+	Rated speed rpm : 1310
Check tolerance	guide sleeve
cm3/1000s. : $+$ 4.0 $+$	travel mm : 13.50
	Tolerance mm : \leftarrow 0.50
Spreed	
Tolerance	
cm3/1000 strokes : 5.0 +	GUIDE SLEEVE POSITION
†	
Check tolerance	
cm3/1000s. : 9.0 +	control lever
<u> </u>	position degree : - 1
2nd speed rpm : 300 +	Rated speed rpm : 1200
+	AT 00
Rack travel in mm: 6.30	Rack travel in mm : 13.80
Tolerance mm : + 0.30 +	Tolerance mm : ← 1.30
Del. quantity	
am3/1000 strokes : 13.0 +	
Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : + 3.0 +	
Check tolerance +	Rated speed rpm : 550
$cm3/1000s$. : \leftarrow 6.0 +	Aneroid pressure
Spreed +	hPa : 1000
Tolerance	Del. quantity
cm3/1000 strokes : 6.0 +	cm3/1000 strokes : 230.0
Check tolerance +	Tolerance
cm3/1000s. : 10.0 +	cm3/1000 strokes : +- 1.0
+	Check tolerance
†	cm3/1000s. : + 4.0
(B) SETTING OF INJECTION PUMP	Spreed
WITH GOVERNOR	Tolerance
†	cm3/1000 strokes : 5.0
	Check tolerance
GUIDE SLEEVE TRAVEL +	cm3/1000s. : 9.0
+	
Rated speed rpm : 300	
guide sleeve	RATED SPEED
travel mm : 1.13	
Tolerance mm : + 0.25	
1400	control lever
Rated speed rpm : 1108	position degree : 104.0
guide sleeve	tolerance degree : + 4.0
travel mm : 9.82	47.00
Tolerance mm : + 0.25	rack travel mm : 13.80
Patrod amond annu a 770	Rated speed rpm : 1095
Rated speed rpm : 370	Tolerance 1/min : + 5
guide sleeve	and the second of
travel mm : 2.00	rack travel mm : 4.00
Tolerance mm : + 0.25	Rated speed rpm : 1195
Pated award and 120	Tolerance 1/min : + 15
Rated speed rpm : 420	made Annual as
+	rack travel mm : 0.75

Tolerance mm : + 0.75 Rated speed rpm : 1300	Rated speed rpm : 400 Pressure hPa : 400 rack travel mm : 12.90 Tolerance mm : + 0.20
LOW IDLE	
control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.20 Tolerance mm : + 0.10 Rated speed rpm : 200	Pressure hPa : 600 rack travel mm : 14.15 Tolerance mm : + 0.20
Testing:	START CUT-OUT
Rated speed rpm : 300 rack travel mm : 5.20 Tolerance mm : + 0.10	Rated speed rpm : > 100 Check speed 1/min : > 80 Rated speed rpm : < 220
Rated speed rpm : 200	Check
CRT mm min. :> 8.10	speed 1/min : < 240
CONTINUOUS—ACTION CONTROL	FUEL DELIVERY CHARACTERISTICS
+	Aneroid pressure hPa : 1000
Rated speed rpm : 350	hPa : 1000 Rated speed rpm : 1050 Del. quantity
TORQUE CONTROL	cm3/1000 strokes : 229.0 Tolerance
Rated speed rpm : 550	$cm3/1000$ strokes : \leftarrow 3.0
TORQUE CONTROL Rated speed rpm : 550 rack travel mm : 14.80 Tolerance mm : + 0.05 Rated speed rpm : 1050 rack travel mm : 14.80 Tolerance mm : + 0.10	Check tolerance cm3/1000s. : + 6.0
Rated speed rpm : 1050	Spreed Tolerance
Rated speed rpm : 1050 + rack travel mm : 14.80 + Tolerance mm : + 0.10 +	cm3/1000 strokes : 8.0 Check tolerance
Pated speed row : 700	cm3/1000s. : 12.0
Rated speed rpm : 700 + rack travel mm : 14.80 +	Aneroid pressure
Tolerance mm : +- 0.05	hPa : - Rated speed rpm : 500
	Del. quantity
ANEROID/ALTITUDE + COMPENSATOR TEST +	cm3/1000 strokes : 134.0 Tolerance
+	cm3/1000 strokes : +- 1.0
SETTING	Check tolerance cm3/1000s. : +- 4.0
Rated speed rpm : 400	Spreed Tolerance
Pressure hPa : 1000 +	cm3/1000 strokes : 8.0
rack travel mm : 14.80 + Tolerance mm : + 0.05	Check tolerance cm3/1000s. : 12.0
MEASUREMENT	BREAKAWAY
Pressure hPa : -	DILL RUMINE
Rated speed rpm : 400 + rack travel mm : 10.80 +	Rack travel in mm : 13.80
Tolerance mm : +- 0.15	Rated speed rpm : 1095
+	Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm 100 Del. quantity cm3/1000 strokes :

210.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm 300 6.30 rack travel mm 0.30 Tolerance mm Del. quantity cm3/1000 strokes 13.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s.6.0 Spreed Tolerance 6.0

cm3/1000 strokes

Check tolerance cm3/1000s.

10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 27.01.95 Edition : ISO 4113 Test oil

Combination No. : 0402646768

Injection pump

Pump designation : PE6P120A320LS7837

: -10

EP type number : 0412626855

Governor

Governer design. : RQ300/950PA971-12

: 0421801765 Governer no.

Cust. part No. : 0260741302

Customer-spec. information Customer : MB-NFZ : 0M441 LA Motor

Power KW : 250.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413047

Inlet press. bar : Tolerance bar : +-

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

: 1409918004 Lube oil

Test Lines : 1680750075 Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm Tolerance mm

test only : **←** 0.10

Rack travel in mm : 20.50Tolerance mm : +0.50

: 6-3-5-2-4-Firing order

: 1-

: 0-60-120-180-240 Phasing

: -300-360 : + 0.30Tolerance

Check

tolerance °NW : **←** 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm: 15.10 Tolerance mm : \leftarrow 0.05

· .	
Del. quantity	guide sleeve
cm3/1000 strokes : 252.0 -	travel mm : 6.00
Tolerance	- Tolerance mm : + 0.10
$cm3/1000 \text{ strokes} : \leftarrow 1.0$	- Rated speed rpm : 1190
Chortones T.D	- guide sleeve
Check tolerance	- travel mm : 11.50
cm3/1000s. : \leftarrow 4.0	- Tolerance mm : + 0.50
Spreed -	CUTAC CLECUE DOCTTON
Tolerance cm3/1000 strokes : 5.0	GUIDE SLEEVE POSITION
Chib/ 1860 Strokes . J.U	Rated speed rpm : 600
Check tolerance	-
cm3/1000s. : 9.0	Rack travel in mm : 20.00
	Tolerance mm : + 0.80
2nd speed rpm : 300	
Rack travel in mm: 6.20	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : + 0.30	- TOLE EOND DELIVERY AT TOLE EOND STOP
Del. quantity	- Rated speed rpm : 550
cm3/1000 strokes : 19.0	- Aneroid pressure
Tolerance	- hPa : 1100
cm3/1000 strokes : + 3.0	- Del. quantity
Check tolerance cm3/1000s. : ← 6.0	- cm3/1000 strokes : 252.0 - Tolerance
Spreed	- roterance - cm3/1000 strokes : +- 1.0
Tolerance	- Check tolerance
cm3/1000 strokes : 6.0	- cm3/1000S. : + 4.0
Check_tolerance	- Spreed
cm3/1000s. : 10.0	- Tolerance
†	- cm3/1000 strokes : 5.0 - Check tolerance
(B) SETTING OF INJECTION PUMP	- cm3/1000s. : 9.0
WITH GOVERNOR	-
1	
CUTATION TO A STATE OF THE STAT	- RATED SPEED
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 300	- control lever
guide sleeve	- position degree : 100.0
travel mm : 1.72	- tolerance degree : + 4.0
Tolerance mm : + 0.10	44.45
Rated speed rpm : 1005	- rack travel mm : 14.10 - Rated speed rpm : 998
Rated speed rpm : 1005	- Rated speed rpm : 998 - Tolerance 1/min : +- 8
travel mm : 6.34	-
Tolerance mm : + 0.10	rack travel mm : 4.00
†	- Rated speed rpm : 1108
Rated speed rpm : 950	Tolerance 1/min : +- 15
guide sleeve + travel mm : 6.00 +	rack travel mm : 0.75
Tolerance mm : + 0.10	- Tolerance mm : +- 0.75
	- Rated speed rpm : 1200
Rated speed rpm : 429	•
guide sleeve	101 THE
travel mm : 4.46	- LOW IDLE
Tolerance mm : + 0.10	•
Rated speed rpm : 580	•
r40	

southed layer	†	
control lever position degree tolerance degree	: 75.0 : + 4.0	START CUT-OUT
Testing:	‡	Rated speed rpm : > 190 Check
	+	speed 1/min : > 170 Rated speed rpm : < 220
Rated speed rpm	: 300_ +	Rated speed rpm : < 220
rack travel mm	: 5.50	Check
Tolerance mm	: + 0.10	speed 1/min : < 240
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00	
Rated speed rpm	: 435	FUEL DELIVERY CHARACTERISTICS
Tolerance 1/min	: ← 30 +	
	+	Aneroid pressure
Rated speed rpm	: 200	hPa : 1100
	†	Rated speed rpm : 950
CRT mm min.	: > 8.60 +	Del. quantity cm3/1000 strokes : 240.0
	†	cm3/1000 strokes : 240.0
TODOUE CONTROL	T	Tolerance
TORQUE CONTROL	: 550 : 15.10 : + 0.05	cm3/1000 strokes : + 3.0
Dated around man	. 550	Check tolerance cm3/1000s. : ← 6.0
Rated speed rpm	: 550 : 15.10	Spreed : - 6.0
rack travel mm Tolerance mm	: + 0.05	Tolerance
roterance min	· • • • • · · · I	cm3/1000 strokes : 8.0
Pated speed rom	· 950 I	Check tolerance
rack travel mm	: 15 10 I	cm3/1000s. : 12.0
Rated speed rpm rack travel mm Tolerance mm	÷ + 0.10	. 12.0
TOCCT CALLOC TIME		Aneroid pressure
		hPa : -
ANEROID/ALTITUDE	+	Rated speed rpm : 500
COMPENSATOR TEST	+	Del. quantity cm3/1000 strokes : 135.0
	+	cm3/1000 strokes : 135.0
	+	Tolerance
SETTING	+	cm3/1000 strokes : + 1.0
	+	Check tolerance
Rated speed rpm	: 400 : 1100 : 15.10	cm3/1000s. : +- 4.0
Pressure hPa	: 1100 +	Spreed
rack travel mm Tolerance mm	15.10	Tolerance
loterance mm	: + 0.05	cm3/1000 strokes : 8.0
MEASUREMENT	Ţ	Check tolerance cm3/1000s. : 12.0
MEMOUREMENT	Į	CIID/ 18003 12.0
Pressure hPa	: - +	
Rated speed rpm	400	BREAKAWAY
rack travel mm	: 9.15 	
Tolerance mm	: + 0.20 +	
	+	Rack travel in mm : 14.10
Rated speed rpm	: 400 +	Rated speed rpm : 998
D	450	Tolerance 1/min : + 8
Pressure hPa	: 150	
	: 10.05	
Tolerance mm	: ← 0.20 <u>†</u>	CTADITING CHEL NELTHERY
Pressure hPa	: 550	STARTING FUEL DELIVERY
rack travel mm	: 13.85 I	Rated speed rpm : 100
	: + 0.20 I	Del. quantity
ioci wioc iiiii	I	cm3/1000 strokes : 235.0
	T	Ulior 1000 Sti ONGS 1 ESS.D

Tolerance cm3/1000 strokes : \leftarrow 20.0

Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

: 300 : 6.20 : + 0.30 Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes : 19.0

Tolerance cm3/1000 strokes : +-3.0

Check tolerance cm3/1000s. 6.0

Spreed Tolerance

cm3/1000 strokes : 6.0

Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 19.01.95 Edition : ISO 4113 Test oil

Combination No. : 0402646772A

Injection pump

Pump designation : PE6F120A320LS7846

EP type number : 0412626865

Governor

Governer design. : RQ300/1050PA1030-21

Governer no. : 0421801758

Cust. part No. : 0250747102

Customer-spec. information Customer : MB-NFZ Motor : 0M441 LA

Power KW : 230.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413047

Inlet press. bar : Tolerance bar

Tolerance l/h: \leftarrow 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

bar Tolerance bar

Lube oil : 1409918004 Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0 x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm Tolerance mm

test only : + 0.10

Rack travel in mm : 20.50Tolerance mm : $\leftarrow 0.50$

: 6-3-5-2-4-Firing order

: 1-

: 0-60-120-180-240 Phasing

: -300-360

Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm : 14.80 Tolerance mm : + 0.05	Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : +- 1.0
Del. quantity cm3/1000 strokes : 230.0	Check tolerance cm3/1000s. : +- 4.0 Spreed
Tolerance cm3/1000 strokes : + 1.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Check tolerance cm3/1000s. : + 4.0	cm3/1000s. : 9.0
Spreed	RATED SPEED
Tolerance cm3/1000 strokes : 5.0	control lever
Check tolerance	position degree : 99.0
cm3/1000s. : 9.0	tolerance degree : + 4.0
2nd speed rpm : 300	rack travel mm : 13.80
1	Rated speed rpm : 1098
Rack travel in mm: 6.30 + Tolerance mm: + 0.30 +	Tolerance 1/min : + 8
Del. quantity	rack travel mm : 4.00
cm3/1000 strokes : 13.0 +	Rated speed rpm : 1200
Tolerance +	Tolerance 1/min : + 15
cm3/1000 strokes : +- 3.0 +-	rack travel mm : 0.75
cm3/1000s. : +- 6.0	Tolerance mm : + 0.75
Spreed	Rated speed rpm : 1300
Tolerance +	,
cm3/1000 strokes : 6.0	LOUTRIC
Check tolerance + cm3/1000s. : 10.0	LOW IDLE
10.0	
+	control lever
(B) SETTING OF INJECTION PUMP	position degree : 72.0
WITH GOVERNOR	tolerance degree : + 4.0
<u> </u>	Testing:
GUIDE SLEEVE TRAVEL	700
Rated speed rpm : 300	Rated speed rpm : 300 rack travel mm : 5.20
Tolerance mm : + 0.10	rack travel mm : 5.20 Tolerance mm : + 0.10
+	
	rack travel mm : 2.00 Rated speed rpm : 405 Tolerance 1/min : +- 20
GUIDE SLEEVE POSITION +	Rated speed rpm : 405
Rated speed rpm : 600	Toterance Timin : += 20
Hatea opeca (pii)	Rated speed rpm : 200
Rack travel in mm: 20.00	, ,
Tolerance mm : + 0.80 +	CRT mm min. : > 6.80
<u> </u>	
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 550	Rated speed rpm : 550
Aneroid pressure	rack travel mm : 14.80
hPa : 1000 +	Tolerance mm : + 0.05

Rated speed rpm : 1050 rack travel mm : 14.80 Tolerance mm : + 0.10	Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : - Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST	Del. quantity cm3/1000 strokes : 138.0 Tolerance
SETTING	cm3/1000 strokes : +- 1.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 400 Pressure hPa : 1000 rack travel mm : 14.80 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 400 rack travel mm : 11.30 Tolerance mm : + 0.15 Rated speed rpm : 400 Pressure hPa : 400 Pressure hPa : 400 Pressure hPa : 400 Pressure hPa : 400 Pressure hPa : 540 rack travel mm : 13.35 Tolerance mm : + 0.20 Pressure hPa : 540 rack travel mm : 14.20 Tolerance mm : + 0.20	cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0
Tolerance mm : + 0.05	Check tolerance cm3/1000s. : 12.0
MEASUREMENT	
Pressure hPa : - Rated speed rpm : 400 rack travel mm : 11.30 Tolerance mm : + 0.15	BREAKAWAY Rack travel in mm : 13.80
Rated speed rpm : 400	Rated speed rpm : 1098 Tolerance 1/min : + 8
Pressure hPa : 400 rack travel mm : 13.35 Tolerance mm : + 0.20	STARTING FUEL DELIVERY
Special by 5/2	Dated and an advantage 400
Pressure hPa : 540 rack travel mm : 14.20 Tolerance mm : + 0.20	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 210.0
START CUT-OUT	Tolerance cm3/1000 strokes : +- 15.0 Check tolerance
Rated speed rpm : > 100	cm3/1000s. : + 19.0
speed 1/min :> 80 Rated speed rpm : < 220	
Check speed 1/min : < 240	LOW IDLE
	Rated speed rpm : 300 rack travel mm : 6.30
FUEL DELIVERY CHARACTERISTICS	Tolerance mm : +- 0.30 Del. quantity
Aneroid pressure hPa : 1000	cm3/1000 strokes : 13.0 Tolerance
Rated speed rpm : 1050	$cm3/1000$ strokes : \leftarrow 3.0
Del. quantity cm3/1000 strokes : 228.0 Tolerance	Check tolerance cm3/1000s. : +- 6.0 Spreed
cm3/10CO strokes : + 3.0 - Check tolerance +	Tolerance cm3/1000 strokes : 6.0
cm3/1000s. : +- 6.0 +- Spreed	Check tolerance cm3/1000s. : 10.0
Tolerance cm3/1000 strokes : 8.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.01.95 Test oil : ISO 4113

Combination No. : 0402646773A

Injection pump

Pump designation : PE6P120A320LS7846

EP type number : 0412626865

Governor

Governer design. : RQV300...1050PA1033

: -15

: 0421814120 Governer no.

Cust. part No. : 0250747202

Customer spec. information : MB-NFZ Customer : 0M441 LA Motor

Power KW : 230.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar 0.1

Tolerance l/h: \leftarrow 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 har Tolerance bar : **←** 1.5

Lube oil : 1409918004 Test lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar $: \leftarrow 1.0$

Prestroke mm Tolerance mm

test only : + 0.10

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

: 6-3-5-2-4-Firing order

: 1-

Phasing : 0-60-120-180-240

: -300-360 : **←** 0.30

Tolerance Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm 550

Rack travel in mm : 14.80

Tolerance mm : + 0.05 +	Check tolerance cm3/1000s. : +- 4.0
Del. quantity cm3/1000 strokes : 230.0	Spreed Tolerance
+	cm3/1000 strokes : 5.0
Tolerance cm3/1000 strokes : +- 1.0	Check tolerance cm3/1000s. : 9.0
Check tolerance	
cm3/1000s. : + 4.0	RATED SPEED
Spreed	
Tolerance	control lever
cm3/1000 strokes : 5.0	position degree : 121.0 tolerance degree : +- 4.0
Check tolerance	totel ance degree . + 4.0
cm3/1000s. : 9.0	rack travel mm : 13.80
2-1	Rated speed rpm : 1095
2nd speed rpm : 300	Tolerance 1/min : +- 5
Rack travel in mm: 6.30	rack travel mm : 4.00
Tolerance mm : + 0.30	Rated speed rpm : 1175
Del. quantity + cm3/1000 strokes : 13.0 +	Tolerance 1/min : +- 15
Tolerance	rack travel mm : 0.75
cm3/1000 strokes : + 3.0 +	Tolerance mm : + 0.75
Check tolerance	Rated speed rpm : 1300
cm3/1000s. : +- 6.0	
Spreed +	LOW IDLE
cm3/1000 strokes : 6.0	LOW IVEL
Check tolerance	
cm3/1000s. : 10.0 +	control lever
İ	position degree : 66.0 tolerance degree : +- 4.0
(B) SETTING OF INJECTION PUMP	total alloc dogleco The
WITH GOVERNOR +	Testing:
†	Rated speed rpm : 300
Ţ	rack travel mm : 5.20
GUIDE SLEEVE POSITION +	Tolerance mm : + 0.10
†	Patest annual many 2000
control lever	Rated speed rpm : 200
position degree : -1	CRT mm min. : > 7.00
Rated speed rpm : 1135	
Rack travel in mm: 13.80	CONTINUOUS-ACTION CONTROL
Tolerance mm : + 1.30 +	COMITINOOD_MCITOM COMIKOF
	Rated speed rpm : 350
FULL LOAD DELIVERY AT FULL LOAD STOP	
+	TORQUE CONTROL
Rated speed rpm : 550	Date day and an arranged
Aneroid pressure + hPa : 1000 +	Rated speed rpm : 550 rack travel mm : 14.80
hPa : 1000 + Del. quantity +	rack travel mm : 14.80 Tolerance mm : + 0.05
cm3/1000 strokes : 230.0 +	
Tolerance +	Rated speed rpm : 1050
cm3/1000 strokes : + 1.0 +	rack travel mm : 14.80

Tolerance mm : ← 0.10	+ Aneroid pressure + hPa : - Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST	+ Del. quantity + cm3/1000 strokes : 138.0
SETTING	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
Rated speed rpm : 400 Pressure hPa : 1000 rack travel mm : 14.80 Tolerance mm : + 0.05 MEASUREMENT	Spreed Tolerance cm3/1000strokes: 8.0 Check tolerance cm3/1000s.: 12.0
Pressure hPa : - Rated speed rpm : 400 rack travel mm : 11.30 Tolerance mm : + 0.15	BREAKAWAY Rack travel in mm : 13.80
Rated speed rpm : 400	Rated speed rpm : 1095 Tolerance 1/min : +- 5
Pressure hPa : 400 rack travel mm : 13.35 Tolerance mm : + 0.20	STARTING FUEL DELIVERY
Pressure hPa : 540 rack travel mm : 14.20 Tolerance mm : + 0.20	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 210.0 Tolerance
START CUT-OUT Rated speed rpm : > 100	
Check speed 1/min :> 80 Rated speed rpm : < 220 Check speed 1/min : < 240	LOW IDLE Rated speed rpm : 300 rack travel mm : 6.30
FUEL DELIVERY CHARACTERISTICS	Tolerance mm : +- 0.30 Del. quantity
Aneroid pressure hPa : 1000 Rated speed rpm : 1050 Del. quantity cm3/1000 strokes : 228.0	- cm3/1000 strokes : 13.0 - Tolerance - cm3/1000 strokes : + 3.0 - Check tolerance - cm3/1000S. : + 6.0
Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000S. : +- 6.0 Spreed Tolerance	Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0
cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0	1

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.01.95 Test oil : ISO 4113

Combination No. : 0402646785A

Injection pump

Pump designation : PE6P120A320LS7869

EP type number : 0412626887

Governor

Governer design. : RQV300...1050PA1078K

Governer no. : 0421815359

Cust. part No. : 9275445

Customer-spec. information Customer : LIEBHERR
Motor : D 9406 TI : D 9406 TI Motor Power KW : 300.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 165 Tolerance l/h : +- 20.0 min. L/h

Test nozzle holde

: 1688901105 assembly

Opening pressure

bar Toterance bar

Lube oil : 1409918004

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter: x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm: 10.50 : **←** 1.50 Tolerance mm

Firing order : 1-6-3-5-2-

: 0-60-120-180-240 Phasing

: -300

: **←** 0.30 Tolerance

Check

: +- 0.75 tolerance °NW

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 12.20 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 283.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

	+	guide sleeve
Check tolerance	-	travel mm : 3.66
cm3/1000\$.	: ← 4.0	Tolerance mm : + 0.25
	<u> </u>	
Spreed	+	Rated speed rpm : 1320
Tolerance	+	guide sleeve
cm3/1000 strokes	: 5.0	travel mm : 13.50
	1	Tolerance mm : +- 0.50
Check tolerance		
cm3/1000s.	: 9.0	
	1	GUIDE SLEEVE POSITION
2nd speed rpm	: 300 🗼	
	1	
Rack travel in mm :	: 6.00	control lever
Tolerance mm	+ 0.10	position degree : - 1
Del. quantity	1	Rated speed rpm : 1185
cm3/1000 strokes	: 35.0	Nated Speed (pin : 1103
Tolerance	, 33.0	Rack travel in mm : 10.80
cm3/1000 strokes	· + 30 1	Tolerance mm : +- 1.30
Check tolerance	1	to certained that
	: + 6.0 	
Spreed	· · · · I	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	${ m I}$	TOLL FORD DELIVERY WE TOLL FOUND STOL
cm3/1000 strokes	: 6.0 I	Rated speed rpm : 1050
Check tolerance	· 3.5	Aneroid pressure
5 144555	: 10.0 I	hPa : -
uib/10003.	. 10.0 T	
	Ť	Del. quantity cm3/1000 strokes : 283.0
(B) SETTING OF INJE	ECTTON DIMO	
	ECITON POPP	Tolerance
WITH GOVERNOR	†	cm3/1000 strokes : +- 1.0
WITH GOVERNOR	‡	Check tolerance
	 ‡	Check tolerance cm3/1000S. : +- 4.0
GUIDE SLEEVE TRAVEL		Check tolerance cm3/1000S. : +- 4.0 Spreed
GUIDE SLEEVE TRAVEL	+	Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
GUIDE SLEEVE TRAVEL	+	Check tolerance cm3/1000s. : +- 4.0 spreed Tolerance cm3/1000 strokes : 5.0
GUIDE SLEEVE TRAVEL Rated speed rpm : guide sleeve	: 300	Check tolerance cm3/1000s. : +- 4.0 spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
GUIDE SLEEVE TRAVEL Rated speed rpm : guide sleeve travel mm :	1.69	Check tolerance cm3/1000s. : +- 4.0 spreed Tolerance cm3/1000 strokes : 5.0
GUIDE SLEEVE TRAVEL Rated speed rpm : guide sleeve travel mm :	: 300	Check tolerance cm3/1000s. : +- 4.0 spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
GUIDE SLEEVE TRAVEL Rated speed rpm : guide sleeve travel mm : Tolerance mm :	1.69 + 0.25	Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
GUIDE SLEEVE TRAVEL Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm :	1.69	Check tolerance cm3/1000s. : +- 4.0 spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
GUIDE SLEEVE TRAVEL Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve	300 1.69 + 0.25	Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
GUIDE SLEEVE TRAVEL Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm :	300 1.69 + 0.25 1117 10.38	Check tolerance cm3/1000S. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 RATED SPEED
GUIDE SLEEVE TRAVEL Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve	300 1.69 + 0.25	Check tolerance cm3/1000S. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 RATED SPEED control lever
GUIDE SLEEVE TRAVEL Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm : Tolerance mm :	300 1.69 + 0.25 1117 10.38 + 0.25	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0
GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Guide sleeve travel mm Tolerance mm	300 1.69 + 0.25 1117 10.38 + 0.25	Check tolerance cm3/1000S. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0 RATED SPEED control lever
GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	300 1.69 + 0.25 1117 10.38 + 0.25 746	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0
GUIDE SLEEVE TRAVEL Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm : Tolerance mm :	300 1.69 + 0.25 1117 10.38 + 0.25 746 6.20	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 11.20
GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	300 1.69 + 0.25 1117 10.38 + 0.25 746	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 11.20 Rated speed rpm : 1105
GUIDE SLEEVE TRAVEL Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm : Tolerance mm : Tolerance mm :	300 1.69 + 0.25 1117 10.38 + 0.25 746 6.20 + 0.25	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 11.20
GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	300 1.69 + 0.25 1117 10.38 + 0.25 746 6.20	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 11.20 Rated speed rpm : 1105 Tolerance 1/min : + 5
GUIDE SLEEVE TRAVEL Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve	300 1.69 + 0.25 1117 10.38 + 0.25 746 6.20 + 0.25 353	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 11.20 Rated speed rpm : 1105 Tolerance 1/min : + 5 rack travel mm : 4.00
GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	300 1.69 + 0.25 1117 10.38 + 0.25 746 6.20 + 0.25 353 2.45	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 11.20 Rated speed rpm : 1105 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1185
GUIDE SLEEVE TRAVEL Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve	300 1.69 + 0.25 1117 10.38 + 0.25 746 6.20 + 0.25 353	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 11.20 Rated speed rpm : 1105 Tolerance 1/min : + 5 rack travel mm : 4.00
GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	300 1.69 + 0.25 1117 10.38 + 0.25 746 6.20 + 0.25 353 2.45 + 0.25	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 11.20 Rated speed rpm : 1105 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15
GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Guide sleeve travel mm Tolerance mm	300 1.69 + 0.25 1117 10.38 + 0.25 746 6.20 + 0.25 353 2.45	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 11.20 Rated speed rpm : 1105 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.50
GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	300 1.69 + 0.25 1117 10.38 + 0.25 746 6.20 + 0.25 353 2.45 + 0.25 403	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 11.20 Rated speed rpm : 1105 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm : Rated speed rpm guide sleeve travel mm Tolerance mm : Rated speed rpm guide sleeve travel mm Tolerance mm : Rated speed rpm guide sleeve travel mm Tolerance mm : Rated speed rpm guide sleeve travel mm Tolerance mm : Rated speed rpm guide sleeve travel mm Tolerance mm : Rated speed rpm guide sleeve travel mm Tolerance mm :	300 1.69 + 0.25 1117 10.38 + 0.25 746 40.25 353 + 0.25 403 3.18	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 11.20 Rated speed rpm : 1105 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.50
GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	300 1.69 + 0.25 1117 10.38 + 0.25 746 6.20 + 0.25 353 2.45 + 0.25 403	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 11.20 Rated speed rpm : 1105 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm : Rated speed rpm guide sleeve travel mm Tolerance mm : Rated speed rpm guide sleeve travel mm Tolerance mm : Rated speed rpm guide sleeve travel mm Tolerance mm : Rated speed rpm guide sleeve travel mm Tolerance mm : Rated speed rpm guide sleeve travel mm Tolerance mm : Rated speed rpm guide sleeve travel mm Tolerance mm :	300 1.69 + 0.25 1117 10.38 + 0.25 746 40.25 353 + 0.25 403 3.18	Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 121.0 tolerance degree : + 4.0 rack travel mm : 11.20 Rated speed rpm : 1105 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50

and the second	‡	rack travel mm Tolerance mm	: 11.20 : + 0.05
control lever position degree : tolerance degree :	74.0 + 4.0	Rated speed rpm	
Testing:	‡	Pressure hPa rack travel mm Tolerance mm	9.20 + 0.10
Rated speed rpm : rack travel mm : Tolerance mm : -	300 6.00 +- 0.10	Pressure hPa rack travel mm Tolerance mm	
Rated speed rpm :	200		
CRT mm min. : 2	> 8.50	START CUT-OUT	400
CONTINUOUS-ACTION CON	NTROL	Rated speed rpm Check	
Rated speed rpm :	400	speed 1/min Rated speed rpm Check	
TORQUE CONTROL		speed 1/min	: < 240
Rated speed rpm : rack travel mm : Tolerance mm : d	1050 12.20 ← 0.05	FUEL DELIVERY CHAR	RACTERISTICS
	800	hPa Rated speed rpm	: - : 800
Rated speed rpm : rack travel mm : Tolerance mm : 4	← 0.10 †	Del. quantity cm3/1000 strokes	: 297.0
Rated speed rpm : rack travel mm : Tolerance mm : 4	800 11.80 ← 0.10 500 10.00 ← 0.10	Tolerance cm3/1000 strokes Check tolerance	
	+	cm3/1000s.	: +- 6.0
Rated speed rpm : rack travel mm : Tolerance mm : H	950 12.10 ← 0.10	Aneroid pressure hPa Rated speed rpm	: - : 500
Rated speed rpm :	+	Del. quantity cm3/1000 strokes Tolerance	
Tolerance mm : 4	← 0.10	cm3/1000 strokes Check tolerance	
ANEROID/ALTITUDE COMPENSATOR TEST	+	cm3/1000s. Aneroid pressure hPa	: ← 6.0
SETTING	Ī	Rated speed rpm Del. quantity	550
Rated speed rpm :	1050	cm3/1000 strokes Tolerance	
	1550 12.20 ⊢ 0.05	cm3/1000 strokes Check tolerance cm3/1000s.	: ← 1.0 : ← 4.0
MEASUREMENT	+	Spreed Tolerance	
Pressure hPa :	850	cm3/1000 strokes Check tolerance	
Rated speed rpm :	1050		: 12.0

BREAKAWAY

Rack travel in mm : 11.20
Rated speed rpm : 1105
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 9.60 Tolerance mm : + 0.20 Del. quantity

cm3/1000 strokes : 170.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance cm3/1000s.

cm3/1000s. : +- 14.0

LOW IDLE

300 Rated speed rpm 6.00 rack travel mm : + 0.10Tolerance mm Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.01.95 Test oil : ISO 4113

Combination No. : 0402646972

Injection pump

Pump designation : PE6P120A320RS7218

: -10

EP type number : 0412626891

Governor

Governer design. : RQV275...1000PA939

: -2

Governer no. : 0421813986

Cust. part No. : 1249381/4

Customer—spec. information Customer : DAF

Motor : WS 268 L Power KW : 268.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 105
Tolerance L/h : +- 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.35 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 14.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

. /.

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 14.95 Tolerance mm : +- 0.05

	 +	Rated speed rpm	: 351
Del. quantity	+	guide sleeve	-
cm3/1000 strokes : 235.	0 +	travel mm	: 2.45 : + 0.25
Tolerance	†	Tolerance mm	: +- 0.25
cm $3/1000$ strokes : \leftarrow 1.	n I	Rated speed rpm	: 380
CIB/ 1000 SELORES	Ĭ	guide sleeve	. 500
Check tolerance	-	travel mm	: 2.66
cm $3/1000$ s. : \leftarrow 4.	0 +	Tolerance mm	: - 0.25
	+		4740
Spreed	†	Rated speed rpm	: 1310
Tolerance cm3/1000 strokes : 5.	o I	guide sleeve travel mm	: 11.50
clib/ 1000 strokes . J.	Ī	Tolerance mm	
Check tolerance	+	70(0) 0,00	
cm3/1000s. : 9.	0 +		
0.1	+	GUIDE SLEEVE POSI	TION
2nd speed rpm : 275	†		
Rack travel in mm: 6.0	n I	control lever	
Tolerance mm : + 0.1		position degree	: -1
Del. quantity	<u> </u>	Rated speed rpm	
cm3/1000 strokes : 17.	0 +		
Tolerance	, †	Rack travel in mm	
cm3/1000 strokes : +- 3.	U †	Tolerance mm	: +- 1.30
cm $3/1000$ s. : +- 6.1	n I		
Spreed	<u> </u>	FULL LOAD DELIVER	Y AT FULL LOAD STOP
Tolerance	+		
cm3/1000 strokes : 8.	0 f	Rated speed rpm	: 850
Check tolerance	.	Aneroid pressure	4000
cm3/1000s. : 12.	· I	hPa Dol guartity	: 1000
	I	Del. quantity cm3/1000 strokes	• 235.0
(B) SETTING OF INJECTION PU	MP ∔	Tolerance	. 203.0
WITH GOVERNOR	+	cm3/1000 strokes	: +- 1.0
	+	Check tolerance	
		cm3/1000s.	: +- 4.0
GUIDE SLEEVE TRAVEL	†	Spreed	
Rated speed rpm : 275	I	Tolerance cm3/1000 strokes	: 5.0
guide sleeve	+	Check tolerance	. 3.0
travel mm : 1.3		cm3/1000s.	: 9.0
Tolerance mm : + 0.1	5 +		
Rated speed rpm : 1058	†	DATEN COEEN	· · · · · · · · · · · · · · · · · ·
Rated speed rpm : 1058 guide sleeve	Ī	RATED SPEED	
travel mm : 8.0	5		
Tolerance mm : + 0.20		control lever	
	+	position degree	: 120.0
Rated speed rpm : 676	+	tolerance degree	: ← 4.0
guide sleeve travel mm : 4.49	, †	rack travel mm	: 13.80
Tolerance mm : \leftarrow 0.2		Rated speed rpm	: 1045
. Section 100 Hall O.E.	1	Tolerance 1/min	: +- 5
Rated speed rpm : 301	+		· •
guide sleeve	_ +	rack travel mm	: 4.00
travel mm : 1.78		Rated speed rpm	: 1165
Tolerance mm : +- 0.25	†	Tolerance 1/min	: +- 15

rack travel mm : 0.70 Tolerance mm : + 0.70 Rated speed rpm : 1250
LOW IDLE
control lever position degree : 82.0 tolerance degree : +- 4.0
Testing:
Rated speed rpm : 275 rack travel mm : 5.00 Tolerance mm : + 0.10
Rated speed rpm : 175
CRT mm min. : > 7.50
CONTINUOUS-ACTION CONTROL
Rated speed rpm : 325
TORQUE CONTROL
Rated speed rpm : 850 rack travel mm : 14.95 Tolerance mm : + 0.05
Rated speed rpm : 1000 rack travel mm : 14.95 Tolerance mm : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST
SETTING
Rated speed rpm : 600 Pressure hPa : 1000 rack travel mm : 14.95 Tolerance mm : + 0.05
MEASUREMENT
Pressure hPa : - Rated speed rpm : 600 rack travel mm : 12.10 Tolerance mm : + 0.10
Rated speed rpm : 600
Pressure hPa : 490

: 14.25 : + 0.05 rack travel mm : Tolerance mm 280 Pressure hPa 12.90 rack travel mm : +- 0.10 Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure 600 Rated speed rpm Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 BREAKAWAY Rack travel in mm : 13.80 Rated speed rpm : 1045 Tolerance 1/min : +-LOW IDLE 275 Rated speed rpm 6.00 rack travel mm Tolerance mm : + 0.10Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.01.95 Test oil : ISO 4113

Combination No. : 0402646974

Injection pump

Pump designation : PE6P120A320RS7218

: -10

EP type number : 0412626891

Governor

Governer design. : RQ275/1000PA936-2

Governer no. : 0421801633

Cust. part No. : 1249597/4

Customer-spec. information

Customer : DAF Motor : WS 268 L

Power KW : 268.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 105 Tolerance L/h : + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 **Lube** oil : 1409918004

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.35
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 14.50 Tolerance mm : ← 0.50

Firing order : 1-5-3-6-2-

. .

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 1

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 14.95 Tolerance mm : + 0.05	travel mm : 4.11 Tolerance mm : + 0.10
Del. quantity cm3/1000 strokes : 235.0	Rated speed rpm : 450 guide sleeve travel mm : 6.00
Tolerance cm3/1000 strokes : +- 1.0	Tolerance mm : + 0.10 Rated speed rpm : 1220
Check tolerance cm3/1000s. : + 4.0	guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
Spreed Tolerance	‡
cm3/1000 strokes : 5.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000S. : 9.0	control lever position degree : - 1
2nd speed rpm : 275	Rated speed rpm : 550
Rack travel in mm : 6.00 Tolerance mm : +- 0.10 Del. quantity	Rack travel in mm: 16.20 Tolerance mm: + 0.60
cm3/1000 strokes : 17.0 Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : +- 3.0 Check tolerance	Rated speed rpm : 850
cm3/1000s. : +- 6.0 Spreed	Aneroid pressure : 1000
Tolerance cm3/1000 strokes : 8.0	Del. quantity cm3/1000 strokes : 235.0
Check tolerance cm3/1000S. : 12.0	Tolerance cm3/1000 strokes : + 1.0
(B) SETTING OF INJECTION PUMP	Check tolerance : + 4.0 + Spreed
WITH GOVERNOR	Tolerance : 5.0
CUTNE SI EENE TRAVEL	+ Check tolerance
GUIDE SLEEVE TRAVEL	+ cm3/1000s. : 9.0
Rated speed rpm : 275 guide sleeve	RATED SPEED
travel mm : 1.62 Tolerance mm : +- 0.10	‡
Rated speed rpm : 1047	+ control lever + position degree : 112.0
guide sleeve travel mm : 6.41	tolerance degree : +- 4.0
Tolerance mm : +- 0.10	+ rack travel mm : 13.95 + Rated speed rpm : 1042
Rated speed rpm : 1000 guide sleeve	Tolerance 1/min : + 8
travel mm : 6.00 Tolerance mm : + 0.10	rack travel mm : 4.00 Rated speed rpm : 1155
Rated speed rpm : 356	Tolerance 1/min : +- 15
	rack travel mm : 0.70

Tolerance mm Rated speed rpm LOW IDLE	: ← 0.70 : 1250	 	Pressure hPa rack travel mm Tolerance mm	: 280 : 12.90 : + 0.10
control lever position degree tolerance degree Testing: Rated speed rpm rack travel mm Tolerance mm	: +- 4.0 : 275 : 5.00 : +- 0.10	+ + + + + + + + + + + + + + + + + + + +	FUEL DELIVERY CHAR Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - 600 : 159.0
rack travel mm Rated speed rpm Tolerance 1/min Rated speed rpm		† †	BREAKAWAY	······································
CRT mm min.		<u></u>	Rack travel in mm Rated speed rpm Tolerance 1/min	: 13.95 : 1042 : +- 8
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 850 : 14.95 : + 0.05	+	Total Carlos Trimity	
Rated speed rpm rack travel mm Tolerance mm		+ + + +	LOW IDLE Rated speed rpm rack travel mm Tolerance mm	: 275 : 6.00
ANEROID/ALTITUDE COMPENSATOR TEST		 	Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	
SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : 1000 : 14.95 : + 0.05	† † † †	Spreed Tolerance cm3/1000 strokes Check tolerance	: +- 6.0 : 8.0
MEASUREMENT		‡	cm3/1000s.	: 12.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 600 : 12.10 : + 0.10	‡		
Rated speed rpm	: 600	1		
Pressure hPa rack travel mm Tolerance mm	: 490 : 14.25 : + 0.05	‡		

GO2

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.12.94 Test oil : ISO 4113

Combination No. : 0402646989

Injection pump

Pump designation : PE6P120A320RS7230

: -10Y

EP type number : 0412626898

Governor

Governer design. : RQV250...1000PA990K

Governer no. : 0421815274

Cust. part No. : 1259708/2

Customer—spec. information Customer : DAF

Motor : WS 315 L Power KW : 315.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 14.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 14.55

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 274.0	guide sleeve travel mm : 3.08 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 400 guide sleeve
Check tolerance cm3/1000s. : + 4.0	travel mm : 3.92 Tolerance mm : + 0.25
Spreed Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 1310 guide sleeve travel mm : 13.50
Check tolerance	Tolerance mm : ← 0.50
cm3/1000s. : 9.0 +	GUIDE SLEEVE POSITION
Rack travel in mm: 5.90 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 17.0 Tolerance	control lever position degree : - 1 Rated speed rpm : 1130 Rack travel in mm : 13.50
cm3/1000 strokes : + 3.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance + cm3/1900 strokes : 8.0 + Check tolerance + cm3/1900 strokes : 6.0 + cm3/1900 strokes	Rated speed rpm : 980 Aneroid pressure
cm3/1000s. : 12.0	hPa : 1500 Del. quantity
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	cm3/1000 strokes : 274.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000s. : +- 4.0 Spreed
Rated speed rpm : 250 guide sleeve travel mm : 1.53	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Tolerance mm : + 0.20	
Rated speed rpm : 1038 + guide sleeve + travel mm : 9.73 +	RATED SPEED
Tolerance mm : ² → 0.15	control lever position degree : 120.0
Rated speed rpm : 686 guide sleeve	tolerance degree : +- 4.0
travel mm : 6.41 Tolerance mm : + 0.25	rack travel mm : 13.55 Rated speed rpm : 1032 Tolerance 1/min : +- 8
Rated speed rpm : 284 guide sleeve + travel mm : 2.27	rack travel mm : 4.00 Rated speed rpm : 1150
Tolerance mm : + 0.25	Tolerance 1/min : +- 15
Rated speed rpm : 334 +	rack travel mm : 0.70

Tolerance mm : + 0.70 Rated speed rpm : 1275	rack travel mm : 9.10 Tolerance mm : + 0.10
LOW IDLE	Rated speed rpm : 980
LOW IDLE control lever position degree : 70.0 tolerance degree : + 4.0 Testing:	Pressure hPa : 760 rack travel mm : 13.15 Tolerance mm : + 0.05 Pressure hPa : 350 rack travel mm : 10.30 Tolerance mm : + 0.10
Rated speed rpm : 250 rack travel mm : 5.20 Tolerance mm : + 0.10	FUEL DELIVERY CHARACTERISTICS
rack travel mm : 2.00 Rated speed rpm : 340 Tolerance 1/min : + 20	Aneroid pressure hPa : 1500 Rated speed rpm : 600 Del. quantity
Rated speed rpm : 150 CRT mm min. : > 7.00	cm3/1000 strokes : 286.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance
TORQUE CONTROL.	cm3/1000s. : + 5.0 Spreed
Rated speed rpm : 340 Tolerance 1/min : + 20 Rated speed rpm : 150 CRT mm min. : > 7.00 TORQUE CONTROL. Rated speed rpm : 980 rack travel mm : 14.55 Tolerance mm : + 0.05 Rated speed rpm : 600 rack travel mm : 13.30 Tolerance mm : + 0.05 Rated speed rpm : 400 rack travel mm : 43.10	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Rated speed rpm : 600	Aneroid pressure hPa : - Rated speed rpm : 600
Rated speed rpm : 400 rack travel mm : 13.10 Tolerance mm : + 0.10	Del. quantity cm3/1000 strokes : 172.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Rated speed rpm : 800 rack travel mm : 14.20 Tolerance mm : + 0.10	cm3/1000s. : +- 4.0
ANEROID/ALTITUDE COMPENSATOR TEST	Rack travel in mm: 13.55 Rated speed rpm: 1032 Tolerance 1/min: +- 8
SETTING	
Rated speed rpm : 980 Pressure hPa : 1500 rack travel mm : 14.55 Tolerance mm : + 0.05	
MEASUREMENT	LOW IDLE
Pressure hPa :	Rated speed rpm : 250 rack travel mm : 5.90 Tolerance mm : + 0.10

G05

Del. quantity		
cm3/1000 strokes	:	17.0
Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000S.	: +	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s	•	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 19.01.95 Test oil : ISO 4113

Combination No. : 0402646996A

Injection pump

Pump designation : PE6P120A320LS7852

EP type number : 0412626871

Governor

Governer design. : RQ300/1050PA1031-4

Governer no. : 0421801656

Cust. part No. : 0230744702

Customer—spec. information Customer : MB-NFZ Motor : CM441 LA Power KW : 250.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: +- 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 20.50Tolerance mm : $\leftarrow 0.50$

Firing order : 6-3-5-2-4-

: 1-

Phasing : 0-60-120-180-240

: -300-360Tolerance : +0.30

Check

tolerance *NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm: 15.10

Tolerance mm : ← 0.05 4	- Tolerance
Totel aine min . 4- 0.05	- cm3/1000 strokes : +- 1.0
Not a switch	Charle toloromes
Del. quantity cm3/1000 strokes : 252.0	- Check tolerance - cm3/1000s. : +- 4.0
alis/ ludu strokes : 252.0	$- \text{ cm} \frac{3}{1000} \cdot \cdot \cdot \cdot + 4.0$
	- Spreed
Tolerance	- Tolerance
cm3/1000 strokes : +- 1.0	- cm3/1000 strokes : 5.0
	- Check tolerance
Check tolerance	- cm3/1000s. : 9.0
cm3/1000s. : + 4.0	•
Spreed	- RATED SPEED
Tolerance	TOTICS OF CLS
cm3/1000 strokes : 5.0	
CIID/ 1000 SCI ONES . J.U	- control lever
Charle dallarman	
Check tolerance	- position degree : 100.0
cm3/1000s. : 9.0	tolerance degree : +- 4.0
. 	•
2nd speed rpm : 300	- rack travel mm : 14.10
+	- Rated speed rpm : 1098 - Tolerance 1/min : +- 8
Rack travel in mm: 6.20	- Tolerance 1/min : +- 8
Tolerance mm : \leftarrow 0.30	-
Del. quantity	- rack travel mm : 4.00
cm3/1000 strokes : 19.0	- Rated speed rpm : 1200
Tolerance	- Tolerance 1/min : + 15
cm3/1000 strokes : + 3.0	
Check tolerance	rack travel mm : 0.75
cm3/1000s. : +- 6.0	- Tolerance mm : + 0.75
Spreed	
	- Rated speed rpm : 1300
Tolerance + cm3/1000 strokes : 6.0	•
CMA/THREE TRAVES . VIII T	
	1.011 751 7
Check tolerance	- LOW IDLE
	- LOW IDLE
Check tolerance	•
Check tolerance cm3/1000s. : 10.0	- control lever
Check tolerance	•
Check tolerance cm3/1000s. : 10.0	- - control lever - position degree : 73.0
Check tolerance cm3/1000s. : 10.0 CB) SETTING OF INJECTION PUMP	- control lever - position degree : 73.0
Check tolerance cm3/1000s. : 10.0 CB) SETTING OF INJECTION PUMP	control lever position degree : 73.0 tolerance degree : + 4.0
Check tolerance cm3/1000S. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	- - control lever - position degree : 73.0
Check tolerance cm3/1000s. : 10.0 CB) SETTING OF INJECTION PUMP	control lever position degree : 73.0 tolerance degree : + 4.0 Testing:
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rom : 300
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rom : 300
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	control lever position degree : 73.0 tolerance degree : + 4.0 Testing:
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rom : 300
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 600	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 600 Rack travel in mm : 20.00	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20 Rated speed rpm : 200
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 600	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 600 Rack travel in mm : 20.00	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20 Rated speed rpm : 200
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 600 Rack travel in mm : 20.00	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20 Rated speed rpm : 200
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 600 Rack travel in mm : 20.00 Tolerance mm : + 0.80	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20 Rated speed rpm : 200 CRT mm min. : > 8.10
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 600 Rack travel in mm : 20.00	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20 Rated speed rpm : 200
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 600 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20 Rated speed rpm : 200 CRT mm min. : > 8.10
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 600 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20 Rated speed rpm : 200 CRT mm min. : > 8.10 TORQUE CONTROL
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 600 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20 Rated speed rpm : 200 CRT mm min. : > 8.10 TORQUE CONTROL
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 600 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1100	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20 Rated speed rpm : 200 CRT mm min. : > 8.10
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 600 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1100 Del. quantity	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20 Rated speed rpm : 200 CRT mm min. :> 8.10 TORQUE CONTROL Rated speed rpm : 550 rack travel mm : 15.10 Tolerance mm : + 0.05
Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 600 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 550 Aneroid pressure hPa : 1100	control lever position degree : 73.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 20 Rated speed rpm : 200 CRT mm min. : > 8.10 TORQUE CONTROL

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rack travel mm : 15.10 Tolerance mm : +- 0.10	- Aneroid pressure - hPa : - - Rated speed rpm : 500 - Del. quantity
ANEROID/ALTITUDE COMPENSATOR TEST	Del. quantity cm3/1000 strokes : 135.0 Tolerance
SETTING	- cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : +- 4.0
	- Spreed
Rated speed rpm : 400 - Pressure hPa : 1100 - rack travel mm : 15.10 -	- Tolerance - cm3/1000 strokes : 8.0 - Check tolerance
rack travel mm : 15.10 Tolerance mm : + 0.05	- cm3/1000s. : 12.0
MEASUREMENT	- BREAKAWAY
Pressure hPa : Rated speed rpm : 400 rack travel mm : 9.15 Tolerance mm : +- 0.20 Rated speed rpm : 400	Rack travel in mm : 14.10 Rated speed rpm : 1098 Tolerance 1/min : +- 8
Pressure hPa : 150	
rack travel mm : 10.05 Tolerance mm : +- 0.20	- STARTING FUEL DELIVERY
Pressure hPa : 550 - rack travel mm : 13.85 - Tolerance mm : +- 0.20	- Rated speed rpm : 100 - Del. quantity - cm3/1000 strokes : 265.0 - Tolerance
Toterance min : 7= 0.20	- cm3/1000 strokes : +- 20.0 - Check tolerance
START CUT-OUT	- cm3/1000s. : +- 24.0
Rated speed rpm : > 100 Check	- - -
speed 1/min :> 80 Rated speed rpm : < 220 Check	LOW IDLE
speed 1/min : < 240	Rated speed rpm : 300 rack travel mm : 6.20 Tolerance mm : +- 0.30
FUEL DELIVERY CHARACTERISTICS	Tolerance mm : +- 0.30 Del. quantity cm3/1000 strokes : 19.0
Aneroid pressure hPa : 1100	Tolerance cm3/1000 strokes : + 3.0
Rated speed rpm : 1050 Del. quantity cm3/1000 strokes : 240.0	Check tolerance cm3/1000s. : +- 6.0 Spreed
Tolerance cm3/1000 strokes : + 3.0	Tolerance cm3/1000 strokes : 6.0
Check tolerance cm3/1000S. : +- 6.0 Spreed	Check tolerance cm3/1000s. : 10.0
Tolerance + m3/1000 strokes : 8.0 + Check tolerance + main tolerance + mai	• •
cm3/1000s. : 12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 19.01.95 Edition Test oil : ISO 4113

Combination No. : 0402646997A

Injection pump

Pump designation : PE6P120A320LS7852

EP type number : 0412626871

Governor

Governer design. : RQV300...950PA1033

: 0421814008 Governer no.

Cust. part No. : 0230744302

Customer-spec. information : MB-NFZ Customer : 0M441 LA Motor

Power KW : 250.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413047

Inlet press. bar : : + 0.1 Tolerance bar

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Lube oil : 1409918004

: 1680750075 Test lines

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Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 5.25 Tolerance mm

: + 0.10test only

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

: 6-3-5-2-4-Firing order

: 1-

Phasing : 0-60-120-180-240

: -300-360 Tolerance : + - 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

550 Rated speed rpm :

Rack travel in mm: 15.10

: **←** 0.05 Tolerance mm

Del. quantity cm3/1000 strokes	: 252.0	+ Del. quantity + cm3/1000 strokes	: 252.0
Tolerance		Tolerance cm3/1000 strokes	: +- 1.0
cm3/1000 strokes	: + 1.0	+ Check tolerance cm3/1000s.	: +- 4.0
Check tolerance cm3/1000s.	: + 4.0	+ Spreed + Tolerance + cm3/1000 strokes	
Spreed Tolerance		+ Check tolerance	
cm3/1000 strokes	: 5.0	T (115) 10005.	. 7.0
Check tolerance cm3/1000s.	: 9.0	RATED SPEED	
2nd speed rpm	: 300	control lever position degree	: 122.0
Rack travel in mm Tolerance mm	: 6.20 : + 0.30	tolerance degree	: ← 4.0
Del. quantity cm3/1000 strokes	: 19.0	rack travel mm Rated speed rpm	: 995
Tolerance cm3/1000 strokes	: ← 3.0	Tolerance 1/min	
Check tolerance cm3/1000s. Spreed	: + 6.0	rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1100 : ← 15
Tolerance cm3/1000 strokes	: 6.0	rack travel mm	
Check tolerance cm3/1000s.	: 10.0	Tolerance mm Rated speed rpm	
(B) SETTING OF INJE	ECTION PUMP	LOW IDLE	
GUIDE SLEEVE TRAVEL	L	control lever position degree	: 85.0
Rated speed rpm : Tolerance mm	: 300 : +- 0.10	tolerance degree Testing:	: 4.0
Totel and the nen		Rated speed rpm	. 300
GUIDE SLEEVE POSITI	ION	rack travel mm Tolerance mm	: 5.50 : + 0.10
control lever	• _ 1	Rated speed rpm	: 200
position degree : Rated speed rpm :	1040	CRT mm min.	: > 8.50
Rack travel in mm : Tolerance mm :	: 14.10 : ← 1.30	CONTINUOUS-ACTION	CONTROL
FULL LOAD DELIVERY	AT FULL LOAD STOP	Rated speed rpm	: 325
Rated speed rpm :	: 550	TORQUE CONTROL	
Aneroid pressure hPa :	: 1100	Rated speed rpm rack travel mm	: 550 : 15.10

Tolerance mm	: ← 0.05	Check tolerance cm3/1000s. : 12.0
Rated speed rpm	: 950	
rack travel mm Tolerance mm	: 15.10 +	Aneroid pressure
Tolerance mm	: +- 0.10 +	hPa : - Rated speed rpm : 500
	I	
ANEROID/ALTITUDE	+	Del. quantity cm3/1000 strokes : 135.0
COMPENSATOR TEST	†	Tolerance
	Ī	cm3/1000 strokes : +- 1.0 Check tolerance
SETTING	+	cm3/1000s. : +- 4.0
Rated speed rpm	: 400	Spreed Tolerance
Pressure hPa	1100	cm3/1000 strokes : 8.0
rack travel mm	: 15.10	Check tolerance
Tolerance mm	: + 0.05	cm3/1000s. : 12.0
MEASUREMENT	1	
Pressure hPa	1	BREAKAWAY
Rated speed rpm	: 400	
rack travel mm	: 9.15	Rack travel in mm: 14.10
Tolerance mm	: + 0.20	Rated speed rpm : 995 Tolerance 1/min : +- 5
Rated speed rpm	: 400 I	Toterance Dimin : +- 3
Pressure hPa	: 150	
rack travel mm	: 10.05 I	STARTING FUEL DELIVERY
	: + 0.20 +	
	+	Rated speed rpm : 100
	: 550 : 13.85	Del. quantity cm3/1000 strokes : 235.0
	: + 0.20 I	Tolerance
	+	cm3/1000 strokes : +- 20.0
CTART CLE OUT		Check tolerance cm3/1000S. : +- 24.0
START CUT-OUT	I	cm3/1000s. : + 24.0
Rated speed rpm	: > 100	
Check		
speed 1/min : Rated speed rpm :	: > 80 + : < 220 +	LOW IDLE
Check	+	644 4466
speed 1/min	: < 240 +	Rated speed rpm : 300
		rack travel mm : 6.20 Tolerance mm : + 0.30
FUEL DELIVERY CHARA	ACTERISTICS	Del. quantity
	+	cm3/1000 strokes : 19.0
Aneroid pressure	: 1100 ‡	Tolerance cm3/1000 strokes : +- 3.0
hPa Rated speed rpm	950	cm3/1000 strokes : +- 3.0 Check tolerance
Del. quantity	+	cm3/1000s. : +- 6.0
cm3/1000 strokes :	: 240.0	Spreed
Tolerance cm3/1000 strokes :	: + 3.0	Tolerance cm3/1000 strokes : 6.0
Check tolerance	· · 3.0	Check tolerance
cm3/1000s. :	: +- 6.0	cm3/1000s. : 10.0
Spreed	+	
Tolerance cm3/1000 strokes :	: 8.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 19.01.95 : ISO 4113

Containation No. : 0402646998A

Injection pump

Pump designation: PE6P120A320LS7852

EP type number : 0412626871

Governor

Governer design. : RQV300...1050PA1033

: -6

Governer no.

: 0421814009

Cust. part No. : 0230744602

Customer-spec. information Customer : MB-NFZ : 0M441 LA : 250.0 Motor Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 110
Tolerance L/h : + 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3 x length mm : 1000 3.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

test only : **←** 0.10

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 6-3-5-2-4-

: 1-

: 0-60-120-180-240 Phasing : -300-360

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm :

550

Rack travel in mm : 15.10 Tolerance mm : + 0.05	Rated speed rpm : 550 Aneroid pressure hPa : 1100
Del. quantity	Del. quantity cm3/1000 strokes : 252.0
cm3/1000 strokes : 252.0	Tolerance cm3/1000 strokes : +- 1.0
Tolerance cm3/1000 strokes : + 1.0	Check tolerance cm3/1000s. : +- 4.0 Spreed
Check tolerance cm3/1000s. : + 4.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Spreed Tolerance	cm3/1000s. : 9.0
cm3/1000 strokes : 5.0	RATED SPEED
Check tolerance cm3/1000S. : 9.0	
2nd speed rpm : 300	control lever position degree : 122.0 tolerance degree : +- 4.0
Rack travel in mm: 6.20 Tolerance mm: + 0.30	rack travel mm : 14.10
Del. quantity cm3/1000 strokes : 19.0	Rated speed rpm : 1095 Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : + 3.0	rack travel mm : 4.00
Check tolerance cm3/1000S. : + 6.0 - Spreed	Rated speed rpm : 1190 Tolerance 1/min : +- 15
Tolerance cm3/1000 strokes : 6.0	rack travel mm : 0.75 Tolerance mm : + 0.75
Check tolerance cm3/1000s. : 10.0	Rated speed rpm : 1300
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
	control lever position degree : 85.0
GUIDE SLEEVE TRAVEL	tolerance degree : +- 4.0
Rated speed rpm : 300 Tolerance mm : +- 0.10	Testing:
<u> </u>	Rated speed rpm : 300 rack travel mm : 5.50 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION	Tolerance mm : + 0.10
control lever	Rated speed rpm : 200
position degree : -1 Rated speed rpm : 1140	CRT mm min. : > 8.60
Rack travel in mm: 14.10 Tolerance mm: + 1.30	CONTINUOUS-ACTION CONTROL
Total differential . The Low	Rated speed rpm : 350
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL

	+ Spreed
Rated speed rpm : 550	+ Tolerance
rack travel mm : 15.10 Tolerance mm : +- 0.05	cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity, cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 1.0
	cm3/1000s. : 12.0
Rated speed rpm : 1050 rack travel mm : 15.10 Tolerance mm : + 0.10	†
rack travel mm : 15.10	+ Aneroid pressure
Toterance mm : += 0.10	+ hPa : - + Rated speed rpm : 500
	Del. quantity,
ANEROID/ALTITUDE	+ cm3/1000 strokes : 135.0
COMPENSATOR TEST	+ Tolerance
	+ cm3/1000 strokes : + 1.0 + Check tolerance
SETTING	+ cm3/1000S. : +- 4.0
	+ Spreed
Rated speed rpm : 400 Pressure hPa : 1100	+ Tolerance
Pressure hPa : 1100	+ cm3/1000 strokes : 8.0
rack travel mm : 15.10 Tolerance mm : +- 0.05	+ Check tolerance + cm3/1000S. : 12.0
roterance min	T (115) 15003 12.0
MEASUREMENT	+
December 10	+ BREAKAWAY
Pressure hPa : - Rated speed rpm : 400	1
rack travel mm : 9.15	Rack travel in mm: 14.10
rack travel mm : 9.15 Tolerance mm : +- 0.20	Rated speed rpm : 1095
2-1-1	+ Tolerance 1/min : + 5
Rated speed rpm : 400	‡
Pressure hPa : 150	
rack travel mm : 10.05	+ STARTING FUEL DELIVERY
Tolerance mm : +- 0.20	Rated speed rpm : 100
Pressure hPa : 550	+ Del. quantity
rack travel mm : 13.85	+ cm3/1000 strokes : 235.0
Tolerance mm : + 0.20	+ Tolerance
	+ cm3/1000 strokes : + 20.0 + Check tolerance
START CUT-OUT	- cm3/1000s. : +- 24.0
	+
Rated speed rpm : > 100	+
Check speed 1/min : > 80	<u> </u>
Rated speed rpm : < 220	LOW IDLE
Check	+
speed 1/min : < 240	+ Rated speed rpm : 300
	+ rack travel mm : 6.20 + Tolerance mm : +- 0.30
FUEL DELIVERY CHARACTERISTICS	+ Del. quantity
	+ cm3/1000 strokes : 19.0
Aneroid pressure	+ Tolerance
hPa : 1100 Rated speed rpm : 1050	+ cm3/1000 strokes : + 3.0 + Check tolerance
Del. quantity	+ cm3/1000s. : +- 6.0
cm3/1000 strokes : 240.0	+ Spreed
Tolerance	+ Tolerance
cm3/1000 strokes : +- 3.0	+ cm3/1000 strokes : 6.0
Check tolerance cm3/1000s. : +- 6.0	+ Check tolerance + cm3/1000s. : 10.0
WIND/ 100001	1 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.08.94 : ISO 4113 Test oil

Combination No. : 0402648931

Injection pump

Pump designation : PE8P120A320LS7847-2

EP type number : 0412628885

Governor

Governer design. : RQ300/950PA1032-10

Governer no. : 0421801735

Cust. part No. : 0230741302

Customer-spec. information Customer : MB-NFZ Motor : CM402 L : 0M402 LA Power KW : 280.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1 Inlet press. bar :

Overflow quantity

min. l/h : 110 Tolerance l/h : + 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

bar Tolerance bar : +- 1.5

Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter : x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm Tolerance mm

test only : + 0.10

Rack travel in mm : 20.50Tolerance mm : $\leftarrow 0.50$

: 8-7-2-6-3 :-5-4-1 Firing order

: 0-45-90-135-180 Phasing : -225-270-315

: +- 0.30 Tolerance

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

550 Rated speed rpm :

	∔ guide sleeve
	travel mm : 6.13
Rack travel in mm: 14.80	Tolerance mm : + 0.10
Tolerance mm : +- 0.05	Toterance min . += 0.10
Toterance IIII : += 0.05	T Batad around your /15
	Rated speed rpm : 415
Del. quantity	guide steeve
cm3/1000 strokes : 239.0 -	travel mm : 3.82
	├ Tolerance mm : ← 0.10
Tolerance	
$cm3/1000$ strokes : \leftarrow 1.0	Rated speed rpm : 550
•	guide sleeve
Check tolerance -	+ travel mm : 6.00
cm3/1000s. : +- 4.0	Tolerance mm : + 0.10
•	
Spreed	Rated speed rpm : 1160
Tolerance -	guide sleeve
cm3/1000 strokes : 6.0	travel mm : 11.50
CIID/ 1000 301 ORE3 . 0.0	Tolerance mm : + 0.50
Check tolerance	Toterance iiiii . TO 0.30
	Datad around man : 977
cm3/1000s. : 9.0 -	Rated speed rpm : 833
2. d	guide sleeve
2nd speed rpm : 300 -	travel mm : 6.38
	Tolerance mm : + 0.10
Rack travel in mm: 5.70 -	†
Tolerance mm : +- 0.30	
Del. quantity	GUIDE SLEEVE POSITION
cm3/1000 strokes : 13.0	
Tolerance -	Rated speed rpm : 600
cm3/1000 strokes : $+$ 3.0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Check tolerance	Rack travel in mm : 20.00
cm3/1000s. : +- 6.0	Tolerance mm : +- 0.80
	r locerance inii
Chroad	1_
Spreed -	
Tolerance	
Tolerance - cm3/1000 strokes : 6.0 -	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance - cm3/1000 strokes : 6.0 - Check tolerance -	-
Tolerance - cm3/1000 strokes : 6.0 -	Rated speed rpm : 550
Tolerance - cm3/1000 strokes : 6.0 - Check tolerance -	- Rated speed rpm : 550 - Aneroid pressure
Tolerance cm3/1000 strokes : 6.0 - Check tolerance cm3/1000s. : 10.0 - Check tolerance cm3/1000s.	Rated speed rpm : 550
Tolerance - cm3/1000 strokes : 6.0 - Check tolerance -	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity
Tolerance cm3/1000 strokes : 6.0 - Check tolerance cm3/1000S. : 10.0 - Check tolerance cm3/100S. : 10.0 - Check tolerance	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity
Tolerance cm3/1000 strokes : 6.0 - Check tolerance cm3/1000s. : 10.0 - Check tolerance cm3/1000s.	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0
Tolerance cm3/1000 strokes : 6.0 - Check tolerance cm3/1000S. : 10.0 - Check tolerance cm3/100S. : 10.0 - Check tolerance	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0
Tolerance cm3/1000 strokes : 6.0 - Check tolerance cm3/1000S. : 10.0 - Check tolerance cm3/100S. : 10.0 - Check tolerance	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.74	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.74 Tolerance mm : + 0.10	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.74 Tolerance mm : + 0.10 Rated speed rpm : 1005	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.74 Tolerance mm : + 0.10 Rated speed rpm : 1005 guide sleeve	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.74 Tolerance mm : + 0.10 Rated speed rpm : 1005 guide sleeve travel mm : 6.84	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.74 Tolerance mm : + 0.10 Rated speed rpm : 1005 guide sleeve	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.74 Tolerance mm : + 0.10 Rated speed rpm : 1005 guide sleeve travel mm : 6.84	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.74 Tolerance mm : 4.0.10 Rated speed rpm : 1005 guide sleeve travel mm : 6.84 Tolerance mm : + 0.10	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.74 Tolerance mm : + 0.10 Rated speed rpm : 1005 guide sleeve travel mm : 6.84 Tolerance mm : + 0.10 Rated speed rpm : 950	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED control lever
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.74 Tolerance mm : + 0.10 Rated speed rpm : 1005 guide sleeve travel mm : 6.84 Tolerance mm : + 0.10 Rated speed rpm : 950 guide sleeve	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED control lever position degree : 97.0
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.74 Tolerance mm : 4.0.10 Rated speed rpm : 1005 guide sleeve travel mm : 6.84 Tolerance mm : 4.70 Rated speed rpm : 950 guide sleeve travel mm : 6.50	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED control lever
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.74 Tolerance mm : + 0.10 Rated speed rpm : 1005 guide sleeve travel mm : 6.84 Tolerance mm : + 0.10 Rated speed rpm : 950 guide sleeve	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED control lever position degree : 97.0 tolerance degree : + 4.0
Tolerance cm3/1000 strokes: 6.0 Check tolerance cm3/1000s.: 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 300 guide sleeve travel mm: 1.74 Tolerance mm: + 0.10 Rated speed rpm: 1005 guide sleeve travel mm: 6.84 Tolerance mm: + 0.10 Rated speed rpm: 950 guide sleeve travel mm: 950 guide sleeve travel mm: 6.50 Tolerance mm: + 0.10	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED RATED SPEED rack travel mm : 13.00
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.74 Tolerance mm : 4.0.10 Rated speed rpm : 1005 guide sleeve travel mm : 6.84 Tolerance mm : 4.70 Rated speed rpm : 950 guide sleeve travel mm : 6.50	Rated speed rpm : 550 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED control lever position degree : 97.0 tolerance degree : + 4.0

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Tolerance 1/min	: ← 8	+
rack travel mm Rated speed rpm Tolerance 1/min	: 1085	ANEROID/ALTITUDE COMPENSATOR TEST
rack travel mm Tolerance mm Rated speed rpm	: ← 0.75	SETTING Rated speed rpm : 400 Pressure hPa : 1200
LOW IDLE		rack travel mm : 14.80 Tolerance mm : + 0.05
control lever		MEASUREMENT
position degree tolerance degree	: 73.0 : ← 4.0	<pre>Pressure hPa : - Rated speed rpm : 400 rack travel mm : 10.60 Tolerance mm : + 0.20</pre>
Testing:		+
Rated speed rpm rack travel mm	: 5.50	Rated speed rpm : 400
Tolerance mm		+ Pressure hPa : 450 + rack travel mm : 12.90 + Tolerance mm : + 0.10
rack travel mm Rated speed rpm	: 420	+
Tolerance 1/min		+ Pressure hPa : 300 + rack travel mm : 11.90
Rated speed rpm	: 200	↑ Tolerance mm : ← 0.15
CRT mm min.	: > 7.50	START CUT-OUT
TORQUE CONTROL		Rated speed rpm : > 100 Check
Rated speed rpm rack travel mm Tolerance mm	: 550 : 14.80	speed 1/min : > 80 Rated speed rpm : > 220 Check
Rated speed rpm		speed 1/min : > 240
rack travel mm Tolerance mm	: 14.00 : ← 0.10	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm		Aneroid pressure
rack travel min Tolerance mm	: 14.10 : + 0.10	hPa : 1200 Rated speed rpm : 950
Rated speed rpm rack travel mm	: 875 : 14.25	+ Del. quantity + cm3/1000 strokes : 214.0 + Tolerance
Tolerance mm	÷ + 0.10	cm3/1000 strokes : + 2.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 14.75	cm3/1000s. : + 5.0 Spreed Tolerance
		+ cm3/1000 strokes : 8.0
Rated speed rpm rack travel mm Tolerance mm	: 12.90	Check tolerance : 12.0
		+ Aneroid pressure + hPa : 450

Rated speed rpm : 400 Del. quantity cm3/1000 strokes : 166. Tolerance cm3/1000 strokes : + 1. Check tolerance cm3/1000s. : + 4. Aneroid pressure hPa : - Rated speed rpm : 400 Del. quantity cm3/1000 strokes : 107. Tolerance	.0	Check tolerance cm3/1000s.	: 10.0
cm3/1000 strokes : + 1. Check tolerance cm3/1000s. : + 4. Spreed Tolerance cm3/1000 strokes : 8. Check tolerance cm3/1000s. : 12.	.0		•
BREAKAWAY Rack travel in mm : 13.0 Rated speed rpm : 998 Tolerance 1/min : +-	8		
STARTING FUEL DELIVERY	1		
Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 220. Tolerance cm3/1000 strokes : +- 10. Check tolerance cm3/1000s. : +- 14.	.0		
LOW IDLE	+		
Rated speed rpm : 300 rack travel mm : 5.7 Tolerance mm : + 0.3 Del. quantity cm3/1000 strokes : 13. Tolerance cm3/1000 strokes : + 3. Check tolerance cm3/1000s. : + 6.6 Spreed Tolerance			
cm3/1000 strokes : 6.0	0 +		

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.10.94 Test oil : ISO 4113

Combination No. : 0402648981

Injection pump

Pump designation : PE8P120A320LS7839

: -10

EP type number : 0412628855

Governor

Governer design. : R9300/950PA971-10

Governer no. : 0421801754

Cust. part No. : 0250749002

Customer—spec. information Customer : MB-NFZ Motor : 0M442 LA

Power KW : 370.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: +- 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Lube oil : 1409918004

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.05
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 14.50 Tolerance mm : + 0.50

Firing order : 8-7-2-6-3 :-5-4-1

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : \leftarrow 0.30

Check

tolerance "NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm: 15.20

Tolerance mm : +- 0.05 +	
	Rated speed rpm : 580
Del. quantity = 289.0 +	guide sleeve travel mm : 6.00
	Tolerance mm : +- 0.10
Tolerance cm3/1000 strokes : + 1.0 +	Rated speed rpm : 1190
+	guide sleeve
Check tolerance cm3/1000s. : + 4.0	travel mm : 11.50
4.0 T	Tolerance mm : +- 0.50
Spreed Tolerance	CUIDE OF PROTECTION
cm3/1000 strokes : 6.0	GUIDE SLEEVE POSITION
+	Rated speed rpm : 600
Check tolerance cm3/1000s. : 9.0	Rack travel in mm : 20.00
+	Tolerance mm : + 0.80
2nd speed rpm : 300	
Rack travel in mm: 5.20	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : + 0.30	Dated aread my
Del. quantity + cm3/1000 strokes : 19.0 +	Rated speed rpm : 550 Aneroid pressure
Tolerance	hPa : 1200
cm3/1000 strokes : + 3.0 + Check tolerance	Del. quantity cm3/1000 strokes : 289.0
cm $3/1000$ s. : \leftarrow 6.0	Tolerance
Spreed +	cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000 strokes : 6.0	cm3/1000s. : +- 4.0
Check tolerance cm3/1000s. : 10.0	Spreed Tolerance
10.0	cm3/1000 strokes : 6.0
(B) SETTING OF INJECTION PUMP	Check tolerance
WITH GOVERNOR	cm3/1000s. : 9.0
+	
GUIDE SLEEVE TRAVEL	RATED SPEED
+	
Rated speed rpm : 300 + guide sleeve +	control lever position degree : 102.0
travel mm : 2.25	tolerance degree : + 4.0
Tolerance mm : + 0.10	rack travel mm : 14.20
Rated speed rpm : 1005	Rated speed rpm : 998
guide sleeve travel mm : 6.33	Tolerance 1/min : + 5
Tolerance mm : +- 0.10	rack travel mm : 4.00
+	Rated speed rpm : 1105
Rated speed rpm : 950	Tolerance 1/min : + 15
travel mm : 6.00 +	rack travel mm : 0.75
Tolerance mm : ← 0.10	Tolerance mm : + 0.75 Rated speed rpm : 1250
Rated speed rpm : 450	macca speca (piii . 120
guide sleeve + travel mm : 4.72 +	LOW IDLE
Tolerance mm : + 0.10	LOW IDLE

control lever position degree tolerance degree	: 76.0 · ← 4.0	rack travel mm : Tolerance mm : +-	11.75 0.20
Testing:	4.0	START CUT-OUT	
Rated speed rpm	. 300	Rated speed rpm :>	100
rack travel mm	5.20	speed 1/min ·>	80
rack travel mm Tolerance mm	: ← 0.10	speed 1/min :> Rated speed rpm : < Check	220
rack travel mm	: 2.00	speed 1/min : <	240
rack travel mm Rated speed rpm	: 425	+	
Tolerance 1/min	: ← 20	FUEL DELTHERY CHARACTERS	CTICC
Rated speed rpm	: 200	+ FUEL DELIVERY CHARACTER	121172
·		+ Aneroid pressure	
CRT mm min.	: > 7.20	+ hPa : 12	200 750
		Rated speed rpm : 7	'50
TORQUE CONTROL		+ cm3/1000 strokes : 2	274.5
		+ Tolerance	
Rated speed rpm	: 550	+ cm3/1000 strokes : +-	3.0
Rated speed rpm rack travel mm Tolerance mm	: 15.20	Check tolerance cm3/1000s. ; +-	4.0
TOTEL ALCE HEI	0.03	1 4 4 4	6.8
Rated speed rpm	: 750	+ Aneroid pressure	
rack travel mm Tolerance mm	: 15.20	+ hPa : 12 + Rated speed rpm : 9	200 200
loterance mm	: +- 0.05	+ Kated Speed rpm : >	'5 U
Rated speed rpm rack travel mm Tolerance mm	: 950	+ Del. quantity + cm3/1000 strokes : 2	71.0
rack travel mm	: 15.20	+ Tolerance	
Tolerance mm	: ← 0.10	+ cm3/1000 strokes : +-	3.0
		Check tolerance cm3/1000s. : +-	6.0
ANEROID/ALTITUDE		+	0.0
COMPENSATOR TEST		+ Aneroid pressure	
		hPa : Rated speed rpm : 5	500
SETTING		Del. quantity	•••
			33.0
Rated speed rpm	: 400	+ Tolerance	4.0
Pressure hPa rack travel mm	: 1200 : 15.20	+ cm3/1000 strokes : +- Check tolerance	1.0
Tolerance mm	: + 0.05	+ cm3/1000s. : +-	4.0
		+ Spreed	
MEASUREMENT		+ Tolerance	
Pressure hPa	•	+ cm3/1000 strokes : + Check tolerance	8.0
Rated speed rpm	400		12.0
rack travel mm	: 8.15	+	
Tolerance mm	: ← 0.15	DDF-01/41/4	
Rated speed rpm	: 400	BREAKAWAY	
· ·		 	
Pressure hPa	: 300 : 10.00	+ Rack travel in mm: 1	
rack travel mm Tolerance mm	: +- 0.20	+ Rated speed rpm : 9 + Tolerance 1/min : +-	98 5
		Tocciance 1/min	,
Pressure hPa	: 500	+	

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STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 255.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm 300 5.20 0.30 rack travel mm Tolerance mm Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. : +--6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 31.01.95 Test oil : ISO 4113

Combination No. : 0402648985

Injection pump

Pump designation : PE8P120A320LS7839

: -10

EP type number : 0412628855

Governor

Governer design. : RQ300/1050PA993-10

Governer no. : 0421801760

Cust. part No. : 0250749502

Customer—spec. information Customer : MB-NFZ Motor : OM442 LA Power KW : 370.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 14.50 Tolerance mm : + 0.50

Firing order : 8-7-2-6-3 :-5-4-1

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : +- 0.30

Check tolerance "NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm: 15.20

Tolerance mm : +- 0.05 +	
Del. quantity	Rated speed rpm : 510 guide steeve
cm3/1000 strokes : 289.0	travel mm : 6.00 Tolerance mm : +- 0.10
Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 1280
Check tolerance cm3/1000s. : +- 4.0	guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
Spreed	
Tolerance cm3/1000 strokes : 6.0	GUIDE SLEEVE POSITION
Check tolerance	Rated speed rpm : 600
cm3/1000s. : 9.0	Rack travel in mm : 20.00 Tolerance mm : + 0.80
2nd speed rpm : 300	
Rack travel in mm : 5.20 + Tolerance mm : + 0.30 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity + cm3/1000 strokes : 19.0 +	Rated speed rpm : 550 Aneroid pressure
Tolerance	hPa : 1200
cm3/1000 strokes : + 3.0 + Check tolerance	Del. quantity cm3/1000 strokes : 289.0
cm3/1000s. : $+6.0$	Tolerance
Spreed + Tolerance +	cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000 strokes : 6.0 +	cm3/1000S. : ← 4.0 Spreed
cm3/1000s. : 10.0	Tolerance
1	cm3/1000 strokes : 6.0 Check tolerance
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	cm3/1000s. : 9.0
	RATED SPEED
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 300	control lever
guide sleeve + travel mm : 1.85 +	position degree : 98.0 tolerance degree : ← 4.0
Tolerance mm : + 0.10	
Rated speed rpm : 1104	rack travel mm : 14.20 Rated speed rpm : 1098
guide sleeve travel mm : 6.34	Tolerance 1/min : + 5
Tolerance mm : + 0.10	rack travel mm : 4.00
Rated speed rpm : 1050	Rated speed rpm : 1195 Tolerance 1/min : +- 15
guide sleeve	
travel mm : 6.00 + Tolerance mm : + 0.10	rack travel mm : 0.75 Tolerance mm : + 0.75
+	Rated speed rpm : 1350
guide sleeve	
travel mm : 1.33 + Tolerance mm : + 0.10 +	LOW IDLE

control lever position degree tolerance degree	: 69.0 · ← 4.0	rack travel mm Tolerance mm	: 11.75 : + 0.20
Testing:	4.0	START CUT-OUT	
•		Rated speed rpm	: > 100
Rated speed rpm	: 300	+ Check	
rack travel mm Tolerance mm	: ↓.,	speed 1/minRated speed rpm	: > 80 · < 220
		+ Check	
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00	speed 1/min	: < 240
Rated speed rpm	: 35U · + 20	<u> </u>	
Toterance (7)	. 1 20	FUEL DELIVERY CHA	NRACTERISTICS
Rated speed rpm	: 200	+	
CRT mm min.	. > E EO	+ Aneroid pressure	. 4200
CRI IIII IIIII.	: > 3.30	hPa Rated speed rpm	· 750
		I Dolation-id-:	
TORQUE CONTROL		+ cm3/1000 strokes	: 274.5
Pated speed rom	. 550	Tolerance cm3/1000 strokes	• 4- 30
rack travel mm	: 15.20	Check tolerance	
Rated speed rpm rack travel mm Tolerance mm	: + 0.05	- cm3/1000s.	: +- 6.0
		+	
Rated speed rpm rack travel mm Tolerance mm	: 750 · 15.20	Aneroid pressure	: 1200
Tolerance mm	: + 0.10	+ hPa + Rated speed rpm	: 1050
		Del. quantity cm3/1000 strokes	
Rated speed rpm	: 1050	+ cm3/1000 strokes	: 269.0
rack travel mm Tolerance mm	: +- 0.10	+ Tolerance + cm3/1000 strokes	• +- 3.0
10001 0 1111		+ Check tolerance	3.0
41/20070 /41/277/07		- Check tolerance cm3/1000s.	: +- 6.0
ANEROID/ALTITUDE COMPENSATOR TEST		+ Aneroid pressure	
CONFERENCE TEST		+ hPa	: -
		+ Rated speed rpm	: 500
SETTING		+ Del. quantity	. 477.0
Rated speed rpm	: 400	+ cm3/1000 strokes + Tolerance	: 133.0
Pressure hPa	: 1200	+ cm3/1000 strokes	: ← 1.0
rack travel mm	: 15.20	+ Check tolerance	
Tolerance mm	: ← 0.05	+ cm3/1000s. + Spreed	: ← 4.0
MEASUREMENT		Tolerance	
		+ cm3/1000 strokes	: 8.0
Pressure hPa		+ Check tolerance	42.0
Rated speed rpm rack travel mm	: 400 : 8.20	t cm3/1000s.	: 12.0
Tolerance mm	: ← 0.15		
		BREAKAWAY	
Rated speed rpm	: 400	†	
Pressure hPa	: 300	Rack travel in mm	: 14.20
rack travel mm	: 9.90	+ Rated speed rpm	: 1098
Tolerance mm	: ← 0.20	+ Tolerance 1/min	
Pressure hPa	: 500	1	
ricodic ma	. 500	1	

G27

STARTING FUEL DELIVERY

100 Rated speed rpm

Del. quantity cm3/1000 strokes : 260.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance cm3/1000s.

: +- 24.0

LOW IDLE

300 Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes :

19.0

Tolerance

cm3/1000 strokes 3.0

Check tolerance cm3/1000s. 6.0

Spreed Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 26.01.95 Edition : ISO 4113 Test oil

Combination No. : 0402648987

Injection pump

Pump designation : PE8P120A320LS7838

: -10

EP type number : 0412628854

Governor

Governer design. : RQV300...950PA1199

: 0421814144 Governer no.

Cust. part No. : 0250746202

Customer-spec. information Customer : MB-NFZ Motor : 0M442 LA

Power KW : 320.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar

Tolerance l/h: + 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

: 1409918004 Lube oil

H01

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter : x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm Tolerance mm

: + 0.10test only

Rack travel in mm : 20.50 Tolerance mm : + 0.50

: 8-7-2-6-3 :-5-4-1 Firing order

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 8

BASIC SETTING

Rated speed rpm :

550

1	• 1 1
Rack travel in mm : 15.00 Tolerance mm : + 0.05	- guide sleeve - travel mm : 5.23 - Tolerance mm : + 0.25
Del. quantity cm3/1000 strokes : 254.0	- Rated speed rpm : 780 - guide sleeve - travel mm : 6.31
Tolerance cm3/1000 strokes : +- 1.0	Tolerance mm : + 0.25
Check tolerance cm3/1000s. : + 4.0	- Rated speed rpm : 1092 - guide sleeve - travel mm : 10.00
Spreed Tolerance	- Tolerance mm : ← 0.25 - Rated speed rpm : 1190
cm3/1000 strokes : 6.0	guide sleeve : 11.50
Check tolerance : 9.0	Tolerance mm : +- 0.50
2nd speed rpm : 300	- GUIDE SLEEVE POSITION
Rack travel in mm: 6.10 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 19.0	control lever position degree : - 1 Rated speed rpm : 1045
Tolerance cm3/1000 strokes : +- 3.0	Rack travel in mm : 14.00
Check tolerance cm3/1000S. : +- 6.0	Tolerance mm : +- 1.30
Spreed	
Tolerance cm3/1000 strokes : 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	Rated speed rpm : 550 Aneroid pressure
Tolerance cm3/1000 strokes : 6.0 Check tolerance	Rated speed rpm : 550 Aneroid pressure Pa : 1000 Del. quantity Cm3/1000 strokes : 254.0 Tolerance Cm3/1000 strokes : +- 1.0
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000S. : 10.0 (B) SETTING OF INJECTION PUMP	Rated speed rpm : 550 Aneroid pressure Pa : 1000 Del. quantity Cm3/1000 strokes : 254.0 Tolerance Cm3/1000 strokes : +- 1.0 Check tolerance Cm3/1000S. : +- 4.0
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 quide sleeve	Rated speed rpm : 550 Aneroid pressure Pa : 1000 Pel. quantity Cm3/1000 strokes : 254.0 Tolerance Cm3/1000 strokes : + 1.0 Check tolerance Cm3/1000s. : + 4.0 Spreed Tolerance Cm3/1000 strokes : 6.0
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300	Rated speed rpm : 550 Aneroid pressure Pa : 1000 Pel. quantity Cm3/1000 strokes : 254.0 Tolerance Cm3/1000 strokes : + 1.0 Check tolerance Cm3/1000s. : + 4.0 Spreed Tolerance
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1012 guide sleeve	Rated speed rpm : 550 Aneroid pressure Pa : 1000 Pel. quantity Cm3/1000 strokes : 254.0 Tolerance Cm3/1000 strokes : +- 1.0 Check tolerance Cm3/1000s. : +- 4.0 Spreed Tolerance Cm3/1000 strokes : 6.0 Check tolerance
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1012	Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 254.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 RATED SPEED
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1012 guide sleeve travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 567 guide sleeve	Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 254.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.29 Tolerance mm : + 0.20 Rated speed rpm : 1012 guide sleeve travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 567	Rated speed rpm : 550 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 254.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED control lever position degree : 122.0

rack travel mm : 4.00 Rated speed rpm : 1105 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1200	Tolerance mm : + 0.15 Pressure hPa : 550 rack travel mm : 13.70 Tolerance mm : + 0.15
LOW IDLE	START CUT-OUT Rated speed rpm : > 190 Check
control lever position degree : 82.0 tolerance degree : + 4.0	speed 1/min :> 170 Rated speed rpm : < 220 Check speed 1/min : < 240
Testing:	
Rated speed rpm : 300 rack travel mm : 4.50 Tolerance mm : +- 0.10 Rated speed rpm : 200 CRT mm min. : > 7.00	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1000 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 242.0 Tolerance cm3/1000 strokes : +- 3.0
CONTINUOUS-ACTION CONTROL	Check tolerance cm3/1000s. : + 6.0
Rated speed rpm : 325	Spreed Tolerance cm3/1000 strokes : 8.0
TORQUE CONTROL	Check tolerance cm3/1000s. : 12.0
Rated speed rpm : 550 rack travel mm : 15.00 Tolerance mm : + 0.05 Rated speed rpm : 950	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 135.0
rack travel mm : 15.00 - Tolerance mm : + 0.10 -	Tolerance cm3/1000 strokes : + 1.0 Check tolerance
ANEROID/ALTITUDE - COMPENSATOR TEST -	cm3/1000s. : +- 4.0 - Spreed - Tolerance - cm3/1000 strokes : 8.0
SETTING -	- Check tolerance - cm3/1000S. : 12.0
Rated speed rpm : 400 Pressure hPa : 1000 rack travel mm : 15.00 Tolerance mm : + 0.05	BREAKAWAY
MEASUREMENT -	Rack travel in mm : 14.00 Rated speed rpm : 995 Tolerance 1/min : +- 5
Rated speed rpm : 400	roterance i/min : +- 5
Pressure hPa : - rack travel mm : 9.10	STARTING FUEL DELIVERY

100 Rated speed rpm :

Del. quantity cm3/1000 strokes : 235.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance cm3/1000s. : + 24.0

LOW IDLE

300 Rated speed rpm 6.10 rack travel mm 0.30 Tolerance mm Del. quantity cm3/1000 strokes :

19.0 Tolerance

cm3/1000 strokes

3.0 Check tolerance

cm3/1000s. Spreed

Tolerance cm3/1000 strokes : 6.0

Check tolerance cm3/1000s.

10.0

6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.01.95 : ISO 4113 Test oil

Combination No. : 0402648993

Injection pump

Pump designation : PE8P120A320LS7838

: -10

EP type number : 0412628854

Governor

Governer design. : RQ300/950PA971-11

Governer no. : 0421801764

Cust. part No. : 0260740202

Customer-spec. information Customer : MB-NFZ : 0M442 LA Motor Power KW : 320.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413047

Inlet press. bar : Tolerance bar : +-0.1

Tolerance l/h: +- 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 bar Tolerance bar : **←** 1.5

Lube oil : 1409918004

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure 🐲 : Tolerance 1 1.0

Prestroke mm Tolerance mm

test only : **←** 0.10

Rack travel in mm : 20.50Tolerance mm : +0.50

: 8-7-2-6-3 :-5-4-1 Firing order

: 0-45-90-135-180 Phasing : -225-270-315

Tolerance : **←** 0.30

Check

tolerance °NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. :

BASIC SETTING

550 Rated speed rpm :

Rack travel in mm : 15.00 Tolerance mm : ← 0.05	guide sleeve travel mm : 4.76 Tolerance mm : +- 0.10
Del. quantity cm3/1000 strokes : 254.0	Rated speed rpm : 580 guide sleeve travel mm : 6.00
Tolerance cm3/1000 strokes : + 1.0	Tolerance mm : + 0.10
Check tolerance cm3/1000s. : + 4.0	Rated speed rpm : 1190 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
Spreed Tolerance cm3/1000 strokes : 6.0	GUIDE SLEEVE POSITION
Check tolerance ————————————————————————————————————	Rated speed rpm : 600
2nd speed rpm : 300	Rack travel in mm : 20.00 Tolerance mm : +- 0.80
Rack travel in mm: 6.10	
Tolerance mm : +- 0.30 Del. quantity	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 19.0 +	Rated speed rpm : 550
Tolerance cm3/1000 strokes : +- 3.0 +-	Aneroid pressure hPa : 1000
Check tolerance + 6.0 +	Del. quantity cm3/1000 strokes : 254.0
Spreed	Tolerance
Tolerance + cm3/1000 strokes : 6.0 +	cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance tm3/1000S. : 10.0	cm3/1000s. : +- 4.0 Spreed
10.0	Tolerance
(B) SETTING OF INJECTION PUMP +	cm3/1000 strokes : 6.0 Check tolerance
WITH GOVERNOR	cm3/1000s. : 9.0
CITOE CLEDIE TRAVEL	DATED COULD
GUIDE SLEEVE TRAVEL	RATED SPEED
Rated speed rpm : 300 + guide sleeve +	control lever
travel mm : 1.72	position degree : 98.0
Tolerance mm : + 0.10	tolerance degree : + 4.0
Rated speed rpm : 1005	rack travel mm : 14.00
guide steeve +	Rated speed rpm : 998
travel mm : 6.34 + Tolerance mm : + 0.10 +	Tolerance 1/min : +- 8
Rated speed rpm : 950	rack travel mm : 4.00 Rated speed rpm : 1100
guide sleeve +	Tolerance 1/min : + 15
travel mm : 6.00 + 0.10 +	rack travel mm : 0.75
TO CET OF THE TOTAL OF THE TOTA	Tolerance mm : + 0.75
Rated speed rpm : 451	Rated speed rpm : 1200
,	

	······································	+ rack travel mm : 13.70 - + Tolerance mm : + 0.15
LOW IDLE		<u> </u>
control lever		START CUT-OUT
position degree tolerance degree	: 74.0 : + 4.0	Rated speed rpm : > 190 Check
Testing:		speed 1/min : > 170 Rated speed rpm : > 220
Rated speed rpm rack travel mm Tolerance mm	: 300 : 6.10	Check speed 1/min : > 240
Tolerance mm	: 0.10	FUEL DELIVERY CHARACTERISTICS
rack travel mm Rated speed rom	: 2.00 : 430	Aneroid pressure
Rated speed rpm Tolerance 1/min	: +- 30	hPa : 1000 Rated speed rpm : 950
Rated speed rpm	: 200	Del. quantity + cm3/1000 strokes : 242.0
CRT mm min.	: > 9.00	Tolerance cm3/1000 strokes : + 3.0
TORQUE CONTROL		- Check tolerance cm3/1000s. : + 6.0
	: 550	Spreed Tolerance
Rated speed rpm rack travel mm Tolerance mm	: 15.00	+ cm3/1000 strokes : 8.0 - Check tolerance
		cm3/1000s. : 12.0
Rated speed rpm rack travel mm Tolerance mm	: 15.00	Aneroid pressure hPa : -
Toter ance an		Rated speed rpm : 500 Del. quantity
ANEROID/ALTITUDE COMPENSATOR TEST		cm3/1000 strokes : 135.0
COLE ENDAFOR TEST		cm3/1000 strokes : + 1.0 Check tolerance
SETTING		cm3/1000s. : + 4.0
Rated speed rpm Pressure hPa		Tolerance cm3/1000 strokes : 8.0
rack travel mm Tolerance mm	: 15.00	Check tolerance cm3/1000s. : 12.0
MEASUREMENT	. 4- 0.05	T (115) 15003 12.0
Pressure hPa		BREAKAWAY
Rated speed rpm rack travel mm	: 400 : 9.10	Rack travel in mm : 14.00
Tolerance mm		Rated speed rpm : 998 Tolerance 1/min : + 8
Rated speed rpm	: 400	T TOCET GITTE 1/10111 . 1 = 0
Pressure hPa rack travel mm		T STARTING FUEL DELIVERY
Tolerance mm	: +- 0.15	+
Pressure hPa	: 550	+ Rated speed rpm : 100

Del. quantity cm3/1000 strokes : 235.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm rack travel mm 300 6.10 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.01.95 Test oil : ISO 4113

Combination No. : 0402666800

Injection pump

Pump designation : PE6P120A320/3LS7854

: -2

EP type number : 0412626935

Governor

Governer design. : RSV600...1050PDA826

: -7 Governer no. : 0421833453

Cust. part No. : 0240747002

Customer—spec. information Customer : MB—NFZ Motor : OM 441 LA Power KW : 250.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : ← 0.1

Overflow quantity

min. l/h : 110 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : +- 0.05

test only : \leftarrow 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 6-3-5-2-4-

: 1

Phasing : 0-60-120-180-240 : -300

Tolerance : +- 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 1030

	1 Anomaid massume
Rack travel in mm : 13.45	+ Aneroid pressure + hPa : -
Tolerance mm : + C.05	+ Del. quantity
Del. quantity	+ cm3/1000 strokes : 225.0 + Tolerance
cm3/1000 strokes : 225.0	+ cm3/1000 strokes : + 1.0
Talanana	+ Check tolerance
Tolerance cm3/1000 strokes : + 1.0	+ cm3/1000s. : + 4.0 + Spreed
	Tolerance
Check tolerance cm3/1000s. : + 4.0	+ cm3/1000 strokes : 6.0 + Check tolerance
CIB/ 10003 +- 4.9	T check toterance : 9.0
Spreed	+
Tolerance cm3/1000 strokes : 6.0	+ RATED SPEED
	T MILE SI LLE
Check tolerance cm3/1000s. : 9.0	†
cm3/1000s. : 9.0	control lever position degree : 87.0
2nd speed rpm : 600	tolerance degree : + 4.0
Rack travel in mm : 3.70	t
Tolerance mm : + 0.30	LOW IDLE
Del. quantity	+
cm3/1000 strokes : 17.0 Tolerance	t control lever
cm3/1000 strokes : $+$ 3.0	+ position degree : 71.0
Check tolerance : +- 6.0	tolerance degree : + 4.0
cm3/1000s. : + 6.0 Spreed	Testing:
Tolerance	+
cm3/1000 strokes : 8.0 Check tolerance	+ Rated speed rpm : 600 + rack travel mm : 3.70
cm3/1000s. : 12.0	Tolerance mm : + 0.10
	+
(B) SETTING OF INJECTION PUMP	rack travel mm : 2.00 Rated speed rpm : 630
WITH GOVERNOR	+ Tolerance 1/min : + 30
	+ Rated speed rpm : 100
	Rated speed rpm : 100
GUIDE SLEEVE POSITION	+ CRT mm min. : > 19.50
	+ SET IDLE AUXILIARY SPRING
control lever position degree : - 3	rack travel mm : 2.00
Rated speed rpm : 800	+
Rack travel in mm : 0.50	TORQUE CONTROL
Tolerance mm : + 0.20	+
	+ Rated speed rpm : 1030
governor spring pre-tension	+ rack travel mm : 13.45 + Tolerance mm : + 0.05
click setting x : 4.00	+
	+ Rated speed rpm : 600
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 600 rack travel mm : 13.45 Tolerance mm : + 0.10
	+
Rated speed rpm : 1030	+

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 600 Rated speed rpm

Del. quantity

cm3/1000 strokes : 230.0

Tolerance

cm3/1000 strokes 3.0

Check tolerance cm3/1000s.

6.0 : +-

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes :

250.0

Tolerance

cm3/1000 strokes : **←** 10.0

Check tolerance

cm3/1000s. : + 14.0

LOW IDLE

600 Rated speed rpm

3.70 rack travel mm Tolerance mm 0.30

Del. quantity cm3/1000 strokes 17.0

Tolerance

cm3/1000 strokes 3.0

Check tolerance

cm3/1000s. 6.0

Spreed

Tolerance

cm3/1000 strokes

8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 27.01.95 Edition : ISO 4113 Test oil

Combination No. : 0402678826

Injection pump

Pump designation : PE8P120A320LS7878

EP type number : 0412628888

Governor

Governer design. : RSV400...1000P1A589

Governer no. : 0421833449

Cust. part No. : 9274608

Customer-spec. information Customer : LIEBHERR

Motor : D 9308 TI Power KW : 330.0

TEST BENCH REQUIREMENTS

Test oil inlet

temo. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : Tolerance bar

Tolerance l/h: + 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

Tolerance bar

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter:

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm Tolerance mm · + 0.05

: + - 0.10test only

Rack travel in mm: 10.50 Tolerance mm

: 1-8-7-2-6 :-3-5-4 Firing order

Phasing : 0-45-90-135-180 : -225-270-315

: + 0.30Tolerance

Check

tolerance °NW : + 0.75

BASIC SETTING

900 Rated speed rpm :

Rack travel in mm : 13.30 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 259.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000S. : +- 4.0

Spreed Tolerance cm3/1000 strokes : 5.0	control lever position degree : 98.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 9.0	rack travel mm : 12.30 Rated speed rpm : 940
2nd speed rpm : 400	Tolerance 1/min : +- 5
Rack travel in mm: 4.60 Tolerance mm: + 0.20 Del. quantity cm3/1000 strokes: 20.0	rack travel mm : 4.00 Rated speed rpm : 1000 Tolerance 1/min : +- 15
Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1160
Spreed Tolerance cm3/1000 strokes : 6.0	rack travel mm : 4.00 Rated speed rpm : 1020
Check tolerance cm3/1000s. : 10.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 73.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring Rated speed rpm : 400
control lever - position degree : -3 - Rated speed rpm : 800 -	rack travel mm : 3.40 Testing:
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Rated speed rpm : 400 rack travel mm : 4.60 Tolerance mm : +- 0.20
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900	rack travel mm : 2.00 Rated speed rpm : 435 Tolerance 1/min : +- 30
Aneroid pressure hPa : 1200 - Del. quantity	TORQUE CONTROL
cm3/1000 strokes : 259.0 - Tolerance cm3/1000 strokes : + 1.0 -	Rated speed rpm : 900 - rack travel mm : 13.30 - Tolerance mm : + 0.05
Check tolerance cm3/1000S. : +- 4.0 Spreed	- Rated speed rpm : 500 - rack travel mm : 13.30 - Tolerance mm : + 0.05
Tolerance - cm3/1000 strokes : 5.0 - Check tolerance -	- Tolerance mm : +- U.05
cm3/1000s. : 9.0 -	- ANEROID/ALTITUDE - COMPENSATOR TEST
RATED SPEED	- SETTING

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 13.30 : +- 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	500 12.00 + 0.10
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 900 : 12.90 : +- 0.05
Pressure hPa rack travel mm Tolerance mm	: 850 : 12.40 : ← 0.10
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 500 : 275.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:
BREAKAWAY	

STARTING FUEL DELIVERY

Rated speed rpm	:		100_
rack travel mm	•		20.50
Tolerance mm	:	+	0.50
Del. quantity cm3/1000 strokes			160.0
Tolerance	:		100.0
cm3/1000 strokes	•	+	10.0
Check tolerance	•	•	,0.0
cm3/1000s.	:	+-	14.0

LOW IDLE

Rated speed rpm	•		400
rack travel mm	•		4.60
Tolerance mm	:	+-	0.20
Del. quantity			
cm3/1000 strokes	:		20.0
Tolerance			
cm3/1000 strokes	:	+-	3.0
Check tolerance			
cm3/1000S.	:	+-	6.0
Spreed			
Tolerance			
cm3/1000 strokes			6.0
Check tolerance			
cm3/1000s.	:		10.0

Rack travel in mm : 12.30
Rated speed rpm : 940
Tolerance 1/min : + 5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.12.94 Test oil : 180 4113

Combination No. : 0402736882

Injection pump

Pump designation : PES6P120A720/3LS7114

: -14

EP type number : 0412726927

Governor

Governer design. : RQ300/1050PA774-3

Governer no. : 0421801451

Cust. part No. : 0210744502

Customer-spec. information Customer : MB-NFZ Motor : OM447 LA

Power KW : 265.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40Tolerance °C : \leftarrow 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance L/h: + 10.0

Test nozzle holde

assembly : 1688901019

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 5.25
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : _6- 2- 4- 1- 5-

: 3

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.30

Check

tolerance *NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

Time to cyl. no. : 6

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 14.10

Rack travel in mm : 14.10

Tolerance mm : +- 0.10

Tolerance mm : ← 0.10 +	
	Rated speed rpm : 404
Del. quantity	guide sleeve
cm3/1000 strokes : 230.0	travel mm : 4.60 Tolerance mm : +- 0.10
Tolerance	
cm $3/1000$ strokes : \leftarrow 1.0	Rated speed rpm : 500
Check tolerance	guide sleeve travel mm : 6.00
cm3/1000s. : +- 4.0	Tolerance mm : +- 0.10
Sproad	Rated speed rpm : 1280
Spreed + Tolerance +	Rated speed rpm : 1280 guide sleeve
cm3/1000 strokes : 5.0 +	travel mm : 11.50
Check tolerance	Tolerance mm : \leftarrow 0.50
cm3/1000s. : 9.0	Rated speed rpm : 949
+	quide sleeve
2nd speed rpm : 300 +	travel mm : 6.30
Rack travel in mm: 6.00	Tolerance mm : +- 0.10
Tolerance mm : + 0.30	
Del. quantity	GUIDE SLEEVE POSITION
cm3/1000 strokes : 17.0	
Tolerance	Rated speed rpm : 600
cm3/1000 strokes : + 3.0 + Check tolerance	Rack travel in mm : 20.00
cm3/1000s. : + 6.0	Tolerance mm : +- 0.80
Spreed	
Tolerance	
cm3/1000 strokes : 8.0 +	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : 12.0	Rated speed rpm : 600
	Aneroid pressure
	hPa : 900
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Del. quantity cm3/1000 strokes : 230.0
MILLI GOAEUROK	Tolerance
	cm3/1000 strokes : + 1.0
GUIDE SLEEVE TRAVEL	Check tolerance
Rated speed rom : 300	cm3/1000S. : +- 4.0 Spreed
Rated speed rpm : 300 + guide sleeve +	Tolerance
travel mm : 2.13 +	cm3/1000 strokes : 5.0
Tolerance mm : + 0.10 +	Check tolerance
Rated speed rpm : 1136	cm3/1000S. : 9.0
guide sleeve travel mm : 6.74	RATED SPEED
guide sleeve	RATED SPEED
guide sleeve travel mm : 6.74 Tolerance mm : + 0.10	
guide sleeve travel mm : 6.74 Tolerance mm : + 0.10	control lever
guide sleeve travel mm : 6.74 Tolerance mm : + 0.10	
guide sleeve travel mm : 6.74 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve	control lever position degree : 99.0 tolerance degree : +- 4.0
guide sleeve travel mm : 6.74 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.40 Tolerance mm : + 0.10	control lever position degree : 99.0 tolerance degree : +- 4.0 rack travel mm : 13.20
guide sleeve travel mm : 6.74 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.40 Tolerance mm : + 0.10 Rated speed rpm : 895	control lever position degree : 99.0 tolerance degree : + 4.0 rack travel mm : 13.20 Rated speed rpm : 1103
guide sleeve travel mm : 6.74 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.40 Tolerance mm : + 0.10	control lever position degree : 99.0 tolerance degree : +- 4.0 rack travel mm : 13.20
guide sleeve travel mm : 6.74 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.40 Tolerance mm : + 0.10 Rated speed rpm : 895 guide sleeve	control lever position degree : 99.0 tolerance degree : + 4.0 rack travel mm : 13.20 Rated speed rpm : 1103

Rated speed rpm : 1180 Tolerance 1/min : +- 15	+ Pressure hPa : 1100_
Tolerance 1/min : ← 15	rack travel mm : 0.30 Tolerance mm : + 0.05
0.75	+ Tolerance mm : + 0.05
rack travel mm : 0.75	Pagaruma 68a
Tolerance mm : + 0.75	Pressure hPa : 1200 rack travel mm : 0.60
Rated speed rpm : 1300	rack travel mm : 0.60 Tolerance mm : + 0.10
	+ Tolerance mm : + 0.10
LOW IDLE	
EGH 10CE	+ START CUT-OUT
	+
control lever	+ Rated speed rpm : > 100
position degree : 74.0	+ Check
tolerance degree : +- 4.0	speed 1/min :> 80 Rated speed rpm : < 220
	+ Rated speed rpm : < 220
Testing:	+ Check
700	+ speed 1/min : < 240
Rated speed rpm : 300	†
rack travel mm : 6.00 Tolerance mm : +- 0.10	FUEL DELIVERY CHARACTERISTICS
Toterance mm : +- U.IU	T FUEL DELIVERY CHARACTERISTICS
rack travel mm : 2.00	Aneroid pressure
rack travel mm : 2.00 Rated speed rpm : 380 Tolerance 1/min : +- 20	+ hPa : 1500
Tolerance 1/min : + 20	+ Rated speed rpm : 1050
	+ Del. quantity
Rated speed rpm : 200	+ Del. quantity + cm3/1000 strokes : 236.0
	+ Tolerance
CRT mm min. :> 8.20	+ cm3/1000 strokes : + 2.0
	+ Check tolerance
	+ cm3/1000s. : $+$ 5.0
TORQUE CONTROL	Spreed
Onted around arms a 400	Tolerance cm3/1000 strokes : 8.0
Rated speed rpm : 600	+ Check tolerance
rack travel mm : 14.10 Tolerance mm : + 0.10	+ cm3/1000S. : 12.0
Total arice min	I (1107 10003
Rated speed rom : 1050	Aneroid pressure
rack travel mm : 14.30	+ hPa : 1500
Rated speed rpm : 1050 rack travel mm : 14.30 Tolerance mm : +- 0.10	+ Rated speed rpm : 700
	+ Del. quantity
Rated speed rpm : 700	+ cm3/1000 strckes : 247.5
rack travel mm : 14.80	+ Tolerance
Tolerance mm : + 0.10	+ cm3/1000 strokes : + 1.5
	Check tolerance
ANEROID/ALTITUDE	+ cm3/1000s. : + 4.5 + Spreed
COMPENSATOR TEST	Tolerance
COLE FIANTON (FO)	+ cm3/1000 strokes : 8.0
	+ Check tolerance
	+ cm3/1000s. : 12.0
MEASUREMENT	+
	+ Aneroid pressure
Pressure hPa : 300	+ hPa :
rack travel mm : -2.10	+ Rated speed rpm : 500
Tolerance mm : + 0.05	+ Del. quantity
December 100	+ cm3/1000 strokes : 147.0
Pressure hPa : 500	Tolerance
rack travel mm : -0.50 Tolerance mm : +- 0.10	+ cm3/1000 strokes : + 1.0 + Check tolerance
TO CETTAINE INTO	+ cm3/1000s. : +- 4.0
	T 4.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

12.0 cm3/1000s.

BREAKAWAY

Rack travel in mm: 13.20 Ratted speed rpm : 1100 Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 250.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

300 Rated speed rpm 6.00 rack travel mm : +- 0.30 Tolerance mm

Del. quantity

cm3/1000 strokes : 17.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance cm3/1000s.

6.0

Spreed

Tolerance cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.01.95 Test oil : ISO 4113

Combination No. : 0402746951

Injection pump

Pump designation : PES6P120A720RS7292

: -1

EP type number : 0412726939

Governor

Governer design. : RQV350...1150PA1074K

Governer no. : 0421815355

Cust. part No. : 0240747902

Customer spec. information Customer : MB-NFZ

Motor : 0M366LA Power KW : 127.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 100 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Lube oil : 1409918004

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

test only : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

°NW after s.o.d. : 3.0

S.o.d. blocking

Barrel no. : 1

*NW after s.o.d. : 3.0

BASIC SETTING

Rated speed rpm : 1150	Rated speed rpm : 367
	guide sleeve travel mm : 1.96
Rack travel in mm : 13.50 + Tolerance mm : +- 0.05 +	Tolerance mm : + 0.25
Del. quantity cm3/1000 strokes : 272.0	Rated speed rpm : 417 guide sleeve travel mm : 2.46
Tolerance	Tolerance mm : + 0.25
cm3/1000 strokes : + 1.0	Rated speed rpm : 510 guide sleeve
Check tolerance cm3/1000s. : + 4.0	travel mm : 3.17 Tolerance mm : + 0.25
Spreed Tolerance	Rated speed rpm : 1480 guide sleeve
cm3/1000 strokes : 8.0	travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 12.0	
2nd speed rpm : 350	GUIDE SLEEVE POSITION
Rack travel in mm: 7.30 + Tolerance mm: + 0.30 +	control lever
Del. quantity cm3/1000 strokes : 13.0	position degree : - 1 Rated speed rpm : 1310
Tolerance cm3/1000 strokes : +- 3.0	Rack travel in mm : 12.50 Tolerance mm : + 2.50
Check tolerance cm3/1000s. : + 6.0	
Spreed + Tolerance +	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 4.0 + Check tolerance	Rated speed rpm : 1150 Aneroid pressure
cm3/1000s. : 8.0	hPa : 1500 Del. quantity
(B) SETTING OF INJECTION PUMP	cm3/1000 strokes : 272.0 Tolerance
WITH GOVERNOR	cm3/1000 strokes : + 1.0 Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000s. : +- 4.0 Spreed
Rated speed rpm : 350 guide sleeve	Tolerance cm3/1000 strokes : 8.0 Check tolerance
travel mm : 1.84 Tolerance : + 0.15	cm3/1000s. : 12.0
Rated speed rpm : 1208	RATED SPEED
guide steeve travel mm : 9.41	TOTALE OF ELE
Tolerance mm : + 0.20	control lever position degree : 112.0
Rated speed rpm : 836 guide sleeve	tolerance degree : +- 4.0
travel mm : 5.58 Tolerance mm : + 0.25	rack travel mm : 12.50 Rated speed rpm : 1195
1100	

H2O

Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1310 Tolerance 1/min : + 15 rack travel mm : 0.70 Tolerance mm : + 0.70 Rated speed rpm : 1400	Pressure hPa : 1500 rack travel mm : 13.50 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 1150 rack travel mm : 10.80 Tolerance mm : + 0.15
control lever position degree : 65.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350	Rated speed rpm : 1150 Pressure hPa : 650 rack travel mm : 12.90 Tolerance mm : + 0.05 Pressure hPa : 250 rack travel mm : 11.40 Tolerance mm : + 0.10
Rated speed rpm : 350 rack travel mm : 5.00 Tolerance mm : + 0.10 Rated speed rpm : 250	START CUT-OUT Rated speed rpm : > 100
CRT mm min. : > 6.50	Check :> 80 Rated speed rpm : < 270 Check
CONTINUOUS-ACTION CONTROL Rated speed rpm : 400	speed 1/min : < 290
nacea speca (piii . 400	FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 13.50 Tolerance mm : + 0.05	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 269.0 Tolerance
TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 13.50 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 13.45 Tolerance mm : + 0.10	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 269.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed
TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 13.50 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 13.45 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 12.80 Tolerance mm : + 0.10	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 269.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0
TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 13.50 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 13.45 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 12.80	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 269.0 Tolerance cm3/1000s strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : 1500 Rated speed rpm : 600
TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 13.50 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 13.45 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 12.80 Tolerance mm : + 0.10 Rated speed rpm : 600 rack travel mm : 12.45	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 269.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 Aneroid pressure hPa : 1500
TORQUE CONTROL Rated speed rpm : 13.50 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 13.45 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 12.80 Tolerance mm : + 0.10 Rated speed rpm : 600 rack travel mm : 12.45 Tolerance mm : + 0.10 ANEROID/ALTITUDE	Aneroid pressure hPa : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 269.0 Tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : 1500 Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 262.0 Tolerance

Aneroid pressure

hPa

500 Rated speed rpm Del. quantity

cm3/1000 strokes : 184.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. : + 4.0

BREAKAWAY

Rack travel in mm: 12.50 Rated speed rpm : 1195 Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm 100 13.50 rack travel mm Tolerance mm : **←** 0.20

Del. quantity

cm3/1000 strokes : 190.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance cm3/1000s.

: * 19.0

LOW IDLE

350 Rated speed rpm 7.30 rack travel mm 0.30 Tolerance mm

Del. quantity cm3/1000 strokes :

13.0 Tolerance 3.0

cm3/1000 strokes : +-

Check tolerance cm3/1000s. : +-6.0

Spreed

Tolerance cm3/1000 strokes : 4.0

Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26.01.95 Test oil : ISO 4113

Combination No. : 0402746957

Injection pump

Pump designation : PES6P120A720RS7292

EP type number : 0412726939

Governor

Governer design. : RQV350...1150PA1074

: -2K

: 0421815367 Governer no.

Cust. part No. : 0250741002

Customer-spec. information Customer : MB-NFZ : 0M366LA Motor Power KW : 157.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity min. L/h : 100 Tolerance L/h : + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

208.5 bar Tolerance bar : + 1.5 Lube oil : 1409918004

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter: 3 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm Tolerance mm : **←** 0.05

test only : **←** 0.10

Rack travel in mm : 20.50Tolerance mm : +0.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

: **←** 0.30 Tolerance

Check

tolerance °NW : **←** 0.75

BEGINNING OF DELIVERY DIFFERENCE

3.0 "NW after s.o.d. :

S.o.d. blocking

Barrel no.

"NW after s.o.d.: 3.0

+	guide sleeve
BASIC SETTING	travel mm : 5.58 Tolerance mm : + 0.25
Rated speed rpm : 1150	Rated speed rpm : 367 guide sleeve
Rack travel in mm : 13.95 Tolerance mm : + 0.05	travel mm : 1.96 Tolerance mm : + 0.25
Del. quantity and 1000 strokes : 288.0	Rated speed rpm : 417 guide sleeve travel mm : 2.46
Tolerance tolera	Tolerance mm : + 0.25 Rated speed rpm : 510
Check tolerance	guide sleeve : 3.11
cm3/1000s. : + 4.0	Tolerance mm : + 0.25
Spreed Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 1480 guide sleeve travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 12.0	
2nd speed rpm : 350	GUIDE SLEEVE POSITION
Rack travel in mm: 7.30 Tolerance mm: + 0.30 Del. quantity	control lever position degree : - 1 Rated speed rpm : 1310
cm3/1000 strokes : 13.0 + Tolerance	Rack travel in mm : 12.95
cm3/1000 strokes : + 3.0 + Check tolerance cm3/1000s. : + 6.0 +	Tolerance mm : + 2.50
Spreed Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 4.0 + Check tolerance cm3/1000s. : 8.0 +	Rated speed rpm : 1150 Aneroid pressure hPa : 1500
‡	Del. quantity cm3/1000 strokes : 288.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000s. : +- 4.0 Spreed
Rated speed rpm : 350	Tolerance cm3/1000 strokes : 8.0
guide sleeve travel mm : 1.84 Tolerance mm : + 0.25	Check tolerance cm3/1000S. : 12.0
Rated speed rpm : 1208 guide sleeve	RATED SPEED
travel mm : 9.41 Tolerance mm : + 0.25	control lever
Rated speed rpm : 836	position degree : 112.0 tolerance degree : +- 4.0

H24

1	SETTING
rack travel mm : 12.95 Rated speed rpm : 1195 Tolerance 1/min : + 5	Rated speed rpm : 1150 Pressure hPa : 1500 rack travel mm : 13.95 Tolerance mm : + 0.05
rack travel mm : 4.00 + Rated speed rpm : 1310 + Tolerance 1/min : + 15	Tolerance mm : + 0.05 MEASUREMENT
rack travel mm : 0.70 Tolerance mm : + 0.70 Rated speed rpm : 1400	Pressure hPa : - Rated speed rpm : 1150 rack travel mm : 10.25 Tolerance mm : + 0.15
LOW IDLE	Rated speed rpm : 1150
control lever position degree : 65.0 tolerance degree : + 4.0	Pressure hPa : 800 rack travel mm : 13.00 Tolerance mm : + 0.05
Testing:	Pressure hPa : 250 rack travel mm : 10.75 Tolerance mm : + 0.15
Rated speed rpm : 350 rack travel mm : 5.00	
rack travel mm : 5.00 Tolerance mm : + 0.10	START CUT-OUT
Rated speed rpm : 250	Rated speed rpm :> 100 Check
CRT mm min. : > 6.50	speed 1/min : > 80 Rated speed rpm : < 270
CONTINUOUS-ACTION CONTROL	Check speed 1/min : < 290
Rated speed rpm : 400	FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL	Aneroid pressure hPa : 1500
Rated speed rpm : 1150 rack travel mm : 13.95	Rated speed rpm : 750 Del. quantity
Tolerance mm : + 0.05	cm3/1000 strokes : 276.0 Tolerance
Rated speed rpm : 950 + rack travel mm : 13.90 + Tolerance mm : + 0.10 +	cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0
Rated speed rpm : 750	Spreed Tolerance
rack travel mm : 13.05 Tolerance mm : + 0.10	cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm : 600 + rack travel mm : 12.90 +	cm3/1000s. : 12.0 Aneroid pressure
Tolerance mm : + 0.10	hPa : 1500 Rated speed rpm : 600
ANEROID/ALTITUDE COMPENSATOR TEST	Del. quantity cm3/1000 strokes : 285.0 Tolerance
THE PROPERTY OF THE PROPERTY O	cm3/1000 strokes : +- 3.0

Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure 500 Rated speed rpm Del. quantity cm3/1000 strokes : 152.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 BREAKAWAY Rack travel in mm: 12.95 Rated speed rpm : 1195 Tolerance 1/min STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 14.00 Tolerance mm : + 0.20Del. quantity cm3/1000 strokes : 225.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s. : +- 19.0 LOW IDLE Rated speed rpm 350 rack travel mm 7.30 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 26.01.95 Edition Test oil : ISO 4113

Combination No. : 0402746960

Injection pump

Pump designation : PES6P120A720RS7292

: -1

EP type number : 0412726939

Governor

Governer design. : RQV350...1150PA1104

: -1K

: 0421815371 Governer no.

Cust. part No. : 0250741302

Customer-spec. information Customer : MB-NFZ Motor : 0M366LA Power KW : 157.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 100 Tolerance L/h : + 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

bar Tolerance bar Lube oil : 1409918004

Test lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : + 0.05Tolerance mm

: + 0.10test only

Rack travel in mm : 20.50 Tolerance mm : + 0.50

: 1-5-3-6-2-: 4 Firing order

: 0-60-120-180-240 Phasing

: -300

: ← 0.30 Tolerance

Check

tolerance °NW : + 0.75

BEGINNING OF DELIVERY DIFFERENCE

°NW after s.o.d. : 3.0

S.o.d. blocking

Barrel no.

°NW after s.o.d. : 3.0

	† guide sleeve
BASIC SETTING	travel mm : 5.58 Tolerance mm : + 0.25
Rated speed rpm : 1150	Rated speed rpm : 367 guide sleeve
Rack travel in mm: 13.95 Tolerance mm: + 0.05	travel mm : 1.96 Tolerance mm : + 0.25
Del. quantity	Rated speed rpm : 417 guide sleeve
cm3/1000 strokes : 288.0	travel mm : 2.46 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 510 guide sleeve
Check tolerance cm3/1000s. : + 4.0	+ travel mm : 3.11 + Tolerance mm : + 0.25
Spreed Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 1480 guide sleeve travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 12.0	- Toterance min . 4- 0.30
2nd speed rpm : 350	GUIDE SLEEVE POSITION
Rack travel in mm : 7.30 Tolerance mm : + 0.30 Del. quantity	control lever position degree : - 1 Rated speed rpm : 1340
cm3/1000 strokes : 13.0 Tolerance	Rack travel in mm: 12.95
cm3/1000 strokes : +- 3.0 Check tolerance	Tolerance mm : + 2.50
cm3/1000s. : +- 6.0 Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes : 4.0	Rated speed rpm : 1150
Check tolerance cm3/1000s. : 8.0	Aneroid pressure : 1500
(n) or thiretton and	Del. quantity cm3/1000 strokes : 288.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance - cm3/1000 strokes : + 1.0
GUIDE SLEEVE TRAVEL	+ Check tolerance - cm3/1000s. : + 4.0 - Spreed
Rated speed rpm : 350	Tolerance cm3/1000 strokes : 8.0
guide sleeve travel mm : 1.84 Tolerance mm : + 0.25	Check tolerance : 12.0
Rated speed rpm : 1208 guide sleeve	RATED SPEED
travel mm : 9.41 Tolerance mm : + 0.25	T control lever
Rated speed rpm : 836	position degree : 108.0 tolerance degree : +- 4.0

1	SETTING
rack travel mm : 12.95 Rated speed rpm : 1195 Tolerance 1/min : +- 5	Rated speed rpm : 1150 Pressure hPa : 1500 rack travel mm : 13.95 Tolerance mm : + 0.05
Toterance Trimin	rack travel mm : 13.95
rack travel mm : 4.00 + Rated speed rpm : 1310 + Tolerance 1/min : + 15	Tolerance mm : + 0.05
Tolerance 1/min : + 15	MEASUREMENT
rack travel mm : 0.70	Pressure hPa : -
Tolerance mm : +- 0.70 +- Rated speed rpm : 1400 +-	Rated speed rpm : 115U
rated speed (pii) : 1400	Pressure hPa : - Rated speed rpm : 1150 rack travel mm : 10.25 Tolerance mm : + 0.15
LOW IDLE	Rated speed rpm : 1150
+	Pressure hPa : 800
control lever	rack travel mm : 13.00 Tolerance mm : +- 0.05
position degree : 62.0 + tolerance degree : + 4.0 +	
+	Pressure hPa : 250 rack travel mm : 10.75
Testing:	rack travel mm : 10.75 Tolerance mm : + 0.15
Rated speed rpm : 350	Total alice fixit
rack travel mm : 5.00 + Tolerance mm : + 0.10 +	
Tolerance mm : + 0.10 +	START CUT-OUT
Rated speed rpm : 250	Rated speed rpm :> 100 Check
CRT mm min. : > 6.50	
	speed 1/min :> 80 Rated speed rpm :< 270 Check
CONTINUOUS-ACTION CONTROL	speed 1/min : < 290
Rated speed rpm : 400	
<u> </u>	FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL	Aneroid pressure hPa : 1500
Rated speed rpm : 1150	Rated speed rpm : 750
rack travel mm : 13.95	Del. quantity
Tolerance mm : + 0.05	cm3/1000 strokes : 276.0 Tolerance
Rated speed rpm : 950	cm3/1000 strokes : +- 2.0
rack travel mm : 13.90 +	Check tolerance
Tolerance mm : + 0.10	cm3/1000s. : +- 5.0 Spreed
Rated speed rpm : 750	Tolerance
rack travel mm : 13.05	cm3/1000 strokes : 8.0
Tolerance mm : + 0.10	Check tolerance cm3/1000S. : 12.0
Rated speed rpm : 600	. 12.0
rack travel mm : 12.90	Aneroid pressure
Tolerance mm : + 0.10	hPa : 1500 Rated speed rpm : 600
<u> </u>	Rated speed rpm : 600 Del. quantity
ANEROID/ALTITUDE +	cm3/1000 strokes : 285.0
COMPENSATOR TEST	Tolerance
#	cm3/1000 strokes : +- 3.0
•	

Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure Rated speed rpm 500 Del. quantity cm3/1000 strokes 152.0 Tolerance cm3/1000 strokes 1.0 Check tolerance cm3/1000s. 4.0 BREAKAWAY 12.95 Rack travel in mm: Rated speed rpm : Tolerance 1/min STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 14.00 Tolerance mm : **←** 0.20 Del. quantity cm3/1000 strokes : 225.0 Tolerance cm3/1000 strokes Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm 350 7.30 rack travel mm 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s.6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 24.01.95 Edition : ISO 4113 Test oil

Combination No. : 0402746962

Injection pump

Pump designation : PES6P120A720RS7292

: -1

EP type number : 0412726939

Governor

Governer design. : RQV350...1150PA1104

: 0421815373 Governer no.

Cust. part No. : 0250741102

Customer-spec. information Customer : MB-NFZ Motor : 0M366LA Power KW : 127.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1417413047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 100
Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1688901105

Opening pressure

bar Tolerance bar : + 1.5 Lube oil : 1409918004

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 4.00 Tolerance mm

test only : ← 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

: 1-5-3-6-2-: 4 Firing order

: 0-60-120-180-240 Phasing

: -300 : +- 0.30 Tolerance

Check

: **←** 0.75 tolerance °NW

BEGINNING OF DELIVERY DIFFERENCE

3.0 °NW after s.o.d. :

S.o.d. blocking

Barrel no. 1

°NW after s.o.d. : 3.0

BASIC SETTING

Rated speed rpm : 1150	Rated speed rpm : 367 guide sleeve
Rack travel in mm : 13.50 Tolerance mm : + 0.05	travel mm : 1.96 Tolerance mm : + 0.25
Del. quantity cm3/1000 strokes : 272.0	+ Rated speed rpm : 417 + guide sleeve + travel mm : 2.46 + Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 510
Check tolerance cm3/1000s. : +- 4.0	travel mm : 3.11 Tolerance mm : + 0.25
Spreed Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 1480 guide sleave travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 12.0	GUIDE SLEEVE POSITION
2nd speed rpm : 350	T GOIDE SLEEVE POSITION
Rack travel in mm : 7.30 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 13.0	control lever position degree : - 1 Rated speed rpm : 1310
Tolerance cm3/1000 strokes : +- 3.0 Check tolerance	Rack travel in mm : 12.50 Tolerance mm : + 2.50
cm3/1000s. : +- 6.0 Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 8.0	Rated speed rpm : 1150 Aneroid pressure hPa : 1500 Del. quantity
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	cm3/1000 strokes : 272.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
GUIDE SLEEVE TRAVEL	+ cm3/1000s. : + 4.0 + Spreed + Tolerance
Rated speed rpm : 350 guide sleeve	cm3/1000 strokes : 8.0 Check tolerance
travel mm : 1.84 Tolerance mm : + 0.25	cm3/1000s. : 12.0
Rated speed rpm : 1208 guide sleeve	RATED SPEED
travel mm : 9.41 Tolerance mm : + 0.25	control lever
Rated speed rpm : 836 guide sleeve	position degree : 109.0 tolerance degree : +- 4.0
travel mm : 5.58 Tolerance mm : + 0.25	rack travel mm : 12.50 Rated speed rpm : 1195

Tolerance 1/min : +- 5	Pressure hPa : 1500 rack travel mm : 13.50
rack travel mm : 4.00	Tolerance mm : + 0.05
rack travel mm : 4.00 + Rated speed rpm : 1310 + Tolerance 1/min : + 15	
Tolerance 1/min : + 15	MEASUREMENT
rack travel mm : 0.70	Pressure hPa : -
Tolerance mm : + 0.70 +	Rated speed rpm : 1150
Rated speed rpm : 1400 +	rack travel mm : 10.80
	Tolerance mm : +- 0.15
LOW IDLE	Rated speed rpm : 1150
+	Pressure hPa : 650
control lever	rack travel mm : 12.90
position degree : 62.0 +	Tolerance mm : \leftarrow 0.05
tolerance degree : +- 4.0	Property has a 250
Testing:	Pressure hPa : 250 rack travel mm : 11.40 Tolerance mm : + 0.10
Teaching.	Tolerance mm : + 0.10
Rated speed rpm : 350	
rack travel mm : 5.00 +	
rack travel mm : 5.00 + Tolerance mm : + 0.10 +	START CUT-OUT
Rated speed rpm : 250	Rated speed rpm : > 100
+	Check
CRT mm min. $:> 6.50$	speed 1/min :> 80 Rated speed rpm : < 270
†	Rated speed rpm : < 270
COAPTANIONIC ACTTONI COAPTROL	Check
CONTINUOUS—ACTION CONTROL	speed 1/min : < 290
Rated speed rpm : 400	
+	FUEL DELIVERY CHARACTERISTICS
TODA IT COMPONE	An - m - 2 d . m - a - a - a - a - a - a - a - a - a -
TORQUE CONTROL	Aneroid pressure hPa : 1500
Rated speed rpm : 1150	Rated speed rpm : 750
	Del. quantity
rack travel mm : 13.50 + Tolerance mm : + 0.05 +	Del. quantity cm3/1000 strokes : 269.0
+	Tolerance
Rated speed rpm : 950	cm3/1000 strokes : +- 2.0
rack travel mm : 13.45	Check tolerance
Tolerance mm : + 0.10 +	cm3/1000s. : + 5.0
Rated speed rpm : 750	Spreed Tolerance
Rated speed rpm : 750 + rack travel mm : 12.80 +	cm3/1000 strokes : 8.0
Tolerance mm : + 0.10	Check tolerance
	cm3/1000s. : 12.0
Rated speed rpm : 600	
rack travel mm : 12.45	Aneroid pressure
Tolerance mm : + 0.10 +	hPa : 1500
†	Rated speed rpm : 600
ANEROID/ALTITUDE	Del. quantity cm3/1000 strokes : 262.0
COMPENSATOR TEST	Tolerance
I	
	cm3/1000 strokes : + 3.0
SETTING	

Aneroid pressure

Rated speed rpm Del. quantity

500

cm3/1000 strokes :

184.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000s.

: + 4.0

BREAKAWAY

Rack travel in mm: 12.50 Rated speed rpm : 1195

Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm

100

rack travel mm : Tolerance mm

13.50

: + 0.20

Del. quantity cm3/1000 strokes :

190.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance cm3/1000s.

: + 19.0

LOW IDLE

Rated speed rpm

350

rack travel mm : Tolerance mm

7.30 : **←** 0.30

Del. quantity

cm3/1000 strokes :

13.0

Tolerance

3.0

cm3/1000 strokes : +-Check tolerance

cm3/1000s.

: +-6.0

Spreed

Tolerance

cm3/1000 strokes :

4.0

Check tolerance

cm3/1000s.

8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.01.95 : ISO 4113 Test oil

Combination No. : 0402945301

Injection pump

Pump designation : PES5P120A720LS8511

EP type number : 0412925201

Governor

Governer design. : RQV325...950PA1154K

Governer no. : 0421815976

Cust. part No. : 0240749302

Customer-spec. information Customer : MB-NFZ : 0M449 LA Motor

Power KW : 216.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2417413082

Inlet press. bar : 3.0 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 90 Tolerance L/h : + 10.0

Test nozzle holde

: 1688901105 assembly

Opening pressure

208.5 Tolerance bar : + 1.5

: 1409918004 Lube oil

Test Lines : 1680750075

Outside diameter : 8.0

x inside diameter: x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.85
Tolerance mm : + 0.05

test only : **←** 0.10

Rack travel in mm: 14.50 Tolerance mm : + 0.50

Firing order : 1-3-5-4-2

Phasing : 0-72-144-216-288
Tolerance : ← 0.30

Check

tolerance *NW : +- 0.75

BEGINNING OF DELIVERY DIFFERENCE

S.o.d. blocking

Barrel no.

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 3.90 Tolerance mm : \leftarrow 0.20

Del. quantity cm3/1000 strokes	: 40.0
Tolerance cm3/1000 strokes	: ← 3.0
Check tolerance cm3/1000s.	: ← 6.0
Spreed	
Tolerance cm3/1000 strokes	: 6.0
Check tolerance cm3/1000s.	: 9.0
Rated speed rpm	: 950
Rack travel in mm Tolerance mm	: 13.50 : +- 0.05
Del. quantity cm3/1000 strokes	: 389.0
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: + 40
Spreed Tolerance cm3/1000 strokes	: 10.0
Check tolerance cm3/1000s.	: 14.0
2nd speed rpm	: 325
Rack travel in mm Tolerance mm Del. quantity	: 4.70 : + 0.30
cm3/1000 strokes Tolerance	: 19.0
cm3/1000 strokes	: ← 3.0
Check tolerance cm3/1000s. Spreed	: +- 6.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 14.0
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP

GUIDE SLEEVE TRAVEL		
Rated speed rpm guide sleeve		
travel mm Tolerance mm	: 2.07 : + 0.20	
Rated speed rpm guide sleeve	: 1006	
travel mm Tolerance mm	: 7.42 : + 0.15	
Rated speed rpm guide sleeve	: 800	
travel mm Tolerance mm	: 4.86 : +- 0.25	
Rated speed rpm guide sleeve		
travel mm Tolerance mm	: 2.33 : + 0.25	
Rated speed rpm guide sleeve	: 395	
travel mm Tolerance mm	: 2.76 : + 0.25	
Rated speed rpm guide sleeve	: 510	
travel mm Tolerance mm	: 3.21 : ← 0.25	
Rated speed rpm guide sleeve	: 1169	
travel mm Tolerance mm	: 12.00 : + 0.25	
Rated speed rpm guide sleeve	: 1250	
travel mm Tolerance mm	: 13.50 : +- 0.50	
GUIDE SLEEVE POSITION		
control lever		
position degree Rated speed rpm	: - 1 : 1160	
Rack travel in mm Tolerance mm	: 12.50 : + 2.50	
FULL LOAD DELIVERY AT FULL LOAD STOP		

Rated speed rpm : 950

Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: ← 1.0 : ← 6.0 : 10.0	Rated speed rpm : 950 rack travel mm : 13.50 Tolerance mm : + 0.05 Rated speed rpm : 850 rack travel mm : 12.80 Tolerance mm : + 0.10 Rated speed rpm : 550 rack travel mm : 11.20 Tolerance mm : + 0.10 Rated speed rpm : 400 rack travel mm : 11.00 Tolerance mm : + 0.20
RATED SPEED		Tolerance mm : + 0.20 Rated speed rpm : 850 rack travel mm : 10.80 Tolerance mm : + 0.20
control lever position degree tolerance degree	: 110.0 : + 4.0	
rack travel mm Rated speed rpm Tolerance 1/min	+	ANEROID/ALTITUDE COMPENSATOR TEST
rack travel mm Rated speed rpm Tolerance 1/min	+	SETTING Rated speed rpm : 950 Pressure hPa : 1200 rack travel mm : 13.50 Tolerance mm : + 0.05
rack travel mm Tolerance mm Rated speed rpm	: 0.75 : + 0.75 : 1250	Tolerance mm : 13.30 MEASUREMENT
LOW IDLE	 	Pressure hPa : - Rated speed rpm : 850 rack travel mm : 8.10 Tolerance mm : + 0.20
control lever position degree tolerance degree	: ← 72.0 : ← 4.0	Pressure hPa : - Rated speed rpm : 350 rack travel mm : 7.30 Tolerance mm : + 0.20
Testing:		
Rated speed rpm rack travel mm Tolerance mm	4.70 + 0.10	Rated speed rpm : 950 Pressure hPa : 300
Rated speed rpm	+	rack travel mm : 9.30 Tolerance mm : + 0.20
CRT mm min.	: > 6.50	Pressure hPa : 600 rack travel mm : 10.80 Tolerance mm : + 0.20
CONTINUOUS-ACTION	CONTROL	TOTE OF THE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFI
Rated speed rpm	: 375	START CUT-OUT
TORQUE CONTROL	——— —	Rated speed rpm : > 140 Check speed 1/min : > 120

Rated speed rpm Check speed 1/min	: < 245 : < 265	‡	Check tolerance cm3/1000S.	: +- 6.0
FUEL DELIVERY CHA	DACTEDICTICS	- -	BREAKAWAY	
FUEL DELIVERT CHA	INACIEKT21TC2	Ţ		
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes		‡	Rack travel in mm Rated speed rpm Tolerance 1/min	: 995
Tolerance		Ŧ		
cm3/1000 strokes Check tolerance	: +- 3.0	‡	STARTING FUEL DEL	IVERY
cm3/1000S. Spreed Tolerance	: ← 6.0	+	Rated speed rpm rack travel mm Tolerance mm	: 100 : 9.00 : +- 0.40
cm3/1000 strokes	: 6.0	Ŧ	Del. quantity	
Check tolerance cm3/1000s.	: 9.0	‡	cm3/1000 strokes Tolerance	: 180.0
Annual di mananima		+	cm3/1000 strokes	: + 20.0
Aneroid pressure hPa	: 1200	1	Check tolerance cm3/1000s.	: +- 24.0
Rated speed rpm Del. quantity		‡		
cm3/1000 strokes Tolerance	: 382.0	†	***************************************	·
cm3/1000 strokes Check tolerance	: ← 2.0	+	LOW IDLE	
cm3/1000s.	: ← 7.0	<u>†</u>	Rated speed rpm rack travel mm	: 325 : 4.70
Aneroid pressure		+	Tolerance mm	: ← 0.30
hPa Rated speed rpm	: 1200 : 550	‡	Del. quantity cm3/1000 strokes	: 19.0
Del. quantity		+	Tolerance	
cm3/1000 strokes Tolerance	: 372.0	‡	cm3/1000 strokes Check tolerance	: ← 3.0
cm3/1000 strokes Check tolerance	: ← 3.0	‡	cm3/1000s. Spreed	: + 6.0
cm3/1000s.	: ← 8.0	‡	Tolerance cm3/1000 strokes	: 8.0
Aneroid pressure hPa	: 600	‡	Check tolerance cm3/1000s.	: 14.0
Rated speed rpm	: 850	+		
Del. quantity cm3/1000 strokes Tolerance	: 304.0	Ŧ		
cm3/1000 strokes	: +- 1.5	Ŧ		
Check tolerance cm3/1000s.	: ← 6.5	Ī		
Aneroid pressure		Ŧ		
hPa Rated speed rpm	: – : 850	<u> </u>		
Del. quantity		+		
cm3/1000 strokes Tolerance	: 207.0	‡		
cm3/1000 strokes	: +- 1.0	‡		

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 31.01.95 Test oil : ISO 4113

Combination No. : 0403476037

Injection pump

Pump designation : PES6MW100/720RS1130

EP type number : 0413406122

Governor

Governer design. : RSV350...1300MWOA318

Governer no. : 0420085052

Cust. part No. :

Customer-spec. information

Customer : MB-NFZ : OM 366 A Motor : 125.0 Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C

: 1419992198 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

: 1688901101 assembly

Opening pressure

: 208.5 : +- 1.5 bar Tolerance bar

: 1680750089 Test lines

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar: 31.0 Tolerance bar : + 1.0

Prestroke mm Tolerance mm

test only : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : ← 1.50

: 1-5- 3- 6- 2-: 4 Firing order

: 0-60-120-180-240 Phasing

: -300 Tolerance : + 0.50

Check

: ← 0.75 tolerance 'NW

BASIC SETTING

Rated speed rpm : 1280

Rack travel in mm: 11.10 : + 0.10 Tolerance mm

Del. quantity

cm3/1000 strokes : 78.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

3.0 cm3/1000s. : +-

Spreed

Tolerance

cm3/1000 strokes : 3.5

	tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 6.0	rack travel mm : 10.00 Rated speed rpm : 1325
Del. quantity cm3/1000 strokes : 11.0	Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : + 2.0 check tolerance	rack travel mm : 4.00 Rated speed rpm : 1395 Tolerance 1/min : +- 15
Check tolerance cm3/1000s. : + 4.5 Spreed	rack travel mm : 1.00
Tolerance cm3/1000 strokes : 3.5 Check tolerance	Tolerance mm : ← 0.70 Rated speed rpm : 1560
cm3/1000s. : 5.5	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 79.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	Testing:
control lever position degree : -3 Rated speed rpm : 800	Rated speed rpm : 350 rack travel mm : 8.10 Tolerance mm : + 0.10
+	rack travel mm : 2.00
Rack travel in mm: 0.65 Tolerance mm: + 0.35	Rated speed rpm : 100
governor spring pre-tension	CRT mm min. : > 19.00
click setting x : 4.00	TORQUE CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1280	Rated speed rpm : 1280 rack travel mm : 11.10 Tolerance mm : + 0.10
Aneroid pressure hPa : - Del. quantity	Rated speed rpm : 750 rack travel mm : 11.75
cm3/1000 strokes : 78.0 + Tolerance cm3/1000 strokes : + 1.0 +	
Check tolerance cm3/1000s. : +- 3.0	Rated speed rpm : 825 rack travel mm : 11.50 Tolerance mm : + 0.10
Spreed Tolerance cm3/1000 strokes : 3.5	
Check tolerance cm3/1000s. : 6.0	FUEL DELIVERY CHARACTERISTICS
	Aneroid pressure
RATED SPEED +	hPa : - Rated speed rpm : 750 Del. quantity
control lever position degree : 109.0	cm3/1000 strokes : 74.0

Tolerance cm3/1000 strokes : \leftarrow 1.5 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 7.0 BREAKAWAY 10.00 Rack travel in mm: Rated speed rpm : Tolerance 1/min : +-STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 83.0 Tolerance cm3/1000 strokes : +-5.0 Check tolerance cm3/1000s. : +-8.0 LOW IDLE Del. quantity cm3/1000 strokes : 11.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 : +-Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s.5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 31.01.95 Test oil : ISO 4113

Combination No. : 0403476059

Injection pump

Pump designation : PES6MW100/720RS1130

EP type number : 0413406122

Governor

Governer design. : RSV750...1250MW0A325

: -1

Governer no. : 0420085112

Cust. part No. :

Customer—spec. information Customer : MB-NFZ

Motor : 0h 366 A Power KW : 125.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1419992198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1688901101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1680750089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

REGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : ← 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : + 0.50

Check tolerance "NW : + 0.75

BASIC SETTING

Rated speed rpm : 1230

Rack travel in mm : 10.95
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 78.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000S.

: +- 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	t control lever
Check tolerance	position degree : 100.0 tolerance degree : + 4.0
cm3/1000s. : 6.0	+
Del. quantity	rack travel mm : 1.00 Tolerance mm : + 0.70
cm3/1000 strokes : 12.0 Tolerance	+ Tolerance mm : + 0.70 + Rated speed rpm : 1350
cm3/1000 strokes : +- 2.0	rack travel mm : 4.00 Rated speed rpm : 1315
Check tolerance : + 4.5	+ Rated speed rpm : 1315
Spreed Tolerance	LOW IDLE
cm3/1000 strokes : 3.5	<u> </u>
Check tolerance cm3/1000s. : 5.5	control lever
	position degree : 78.0 tolerance degree : + 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Testing:
	1
	Rated speed rpm : 750 rack travel mm : 5.65 Tolerance mm : + 0.15
CUIDE OF ED & POCTITON	+ rack travel mm : 5.65
GUIDE SLEEVE POSITION	+
control lever	rack travel mm : 2.00
	T Rated speed rpm : 100
position degree : -3 Rated speed rpm : 800	+
	+ CRT mm min. : > 19.00
Rack travel in mm: 0.65	+
Tolerance mm : + 0.35	TORQUE CONTROL
governor spring	I TORGOE CONTROL
pre-tension	Rated speed rpm : 1230
click setting x : 4.00	Rated speed rpm : 1230 rack travel mm : 10.95 Tolerance mm : + 0.05
•	+ Tolerance mm : ← 0.05
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 600
	+ rack travel mm : 10.95
Rated speed rpm : 1230	+ Tolerance mm : ← 0.10
Aneroid pressure	†
hPa : -	†
Del. quantity cm3/1000 strokes : 78.0	I
Tolerance	FUEL DELIVERY CHARACTERISTICS
cm3/1000 strokes : ← 1.0	
Check tolerance	Aneroid pressure
cm3/1000s. : \leftarrow 3.0	+ hPa : -
Spreed	Rated speed rpm : 600
Tolerance	Del. quantity cm3/1000 strokes : 57.0
cm3/1000 strokes : 3.5 Check tolerance	+ CM3/1000 Strokes : 37.0 + Tolerance
cm3/1000s. : 6.0	+ cm3/1000 strokes : +- 1.5
	+ Check tolerance + cm3/1000s. : +- 4.0
RATED SPEED	- Spreed : +- 4.0
IVILLA OI ELA	Tolerance
	- cm3/1000 strokes : 5.0
	•

Check tolerance cm3/1000s.

7.0

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 83.0

Tolerance

5.0 cm3/1000 strokes : +-

Check tolerance

cm3/1000s. 8.0

LOW IDLE

Del. quantity cm3/1000 strokes : 12.0

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance cm3/1000s. 4.5

Spreed

Tolerance 3.5 cm3/1000 strokes :

Check tolerance cm3/1000s. 5.5

Note inst. in remarks column

Test scheet : FIA

Edition : 30.01.95

replaces

Calibrating oil : ISO-4113

Injection pump : VE4/11F1250R613 : 0 460 414 114 Type number

Customer Part-No. :

Customer-specific information Customer : IVECO-FIAT

: 8045.25.210 Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibratir@-oil retum>teு். > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.03

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 027 assembly>

Openina .

bar: 250.00...253.00 Pressure>

Perforated plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mn: 450

Start of delivery Prestroke mm: -(from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

Speed 1/min: 800

Setting value mm: 2.50...2.90

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 800 Speed

Setting value bar: 5.70...6.30

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 800

Del. quantity cm3/
> 1000s.: 67.00...68.00

Shutoff

electromagnet>Volt: 12 cm3/: 3.5 Dispersion 1000s.: (4.0)

Low-idle speed regulation

1/min: 325 Speed

Del. quantity cm3/

1000s.: 11.00...15.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.5 1000s.: (3.5)

Full-load speed regulation

Speed 1/min: 1325

Del. quantity cm3/

1000s.: 43.00...47.00

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100 Speed

Del. quantity cm3/: 65.00...115.00

mind> 1000s.: 90.00

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

1st speed 1/min: 700

mm: 1.40...2.20 TD travel

> mm: (1.10...2.50)
electromagnet>Volt: 12
2nd speed 1/min: 1150

mm: 6.00...6.80 TD travel mm: (5.70...7.10) >

Shutoff

electromagnet>Volt: 12

Supply-pump pressure characteristic:

		+ electromagnet>Volt: 12
1st speed 1/min Supply-pump	: 400	Del. quantity cm3/: 67.5070.50 > 1000S.: (65.5072.50)
pressure> bar Shutoff	: 3.704.30	
electromagnet>Volt 2nd speed 1/min	: 12 : 800	Mech. shutoff:
Supply-pump pressure> bar	: 5.706.30	1st speed 1/min: 1250 Del. quantity cm3/: 0.003.00
Shutoff electromagnet>Volt 3rd speed 1/min	: 12 : 1250	> 1000s.: - Shutoff electromagnet>volt: 12
Supply-pump pressure> bar Shutoff	: 7.708.30	Electr. shutoff:
electromagnet>Volt	: 12	1st speed 1/min: 325 Del. quantity cm3/: 0.003.00
Overlow quantity a	t overflow valve:	+ > 1000s.: - + Shutoff
1st speed 1/min Shutoff	: 400	electromagnet>volt: -
electromagnet>Volt Overflow	: 41.6086 <i>.</i> 10	Idle delivery:
quantity> cm3/10s 2nd speed 1/min Shutoff		+ 1st speed 1/min: 325 + Shutoff + electromagnet>Volt: 12
	55.00138.80	+ Del. quantity cm3/: 11.0015.00 + > 1000S.: (9.0017.00)
quantity> cm3/10s		Dispersion cm3/: 3.5 > 1000S.: (3.5)
Delivery-quant. and	d breakaway char.:	+ 2nd speed 1/min: 400 + Shutoff
1nd speed 1/min Shutoff	1420	+ electromagnet>Volt: 12 + Del. quantity cm3/: 0.003.00 + > 1000S.: -
electromagnet>Volt Del. quantity cm3/ > 1000s.	0.003.00	Automatic starting fuel delivery:
2nd speed 1/min. Shutoff		1st speed 1/min: 250 Shutoff
	43.0047.00 (39.0051.00)	electromagnet>Volt: 12 bel. quantity cm3/: 45.0075.00 > 10008:: (45.0075.00)
3rd speed 1/min Shutoff		2nd speed 1/min: 150
electromagnet>Volt: Del. quantity cm3/:	49.0061.00	+ Shutoff + electromagnet>Volt: 12
> 1000s.: 4th speed 1/min: Shutoff		Del. quantity cm3/: 75.00125.00 > 10008.: (75.00125.00)
electromagnet>Volt: Del. quantity cm3/:	58.0061.00	+ 4th speed 1/min: 100 + Shutoff
5th speed 1/min: Shutoff		+ electromagnet>Volt: 12 + Del. quantity cm3/: 65.00115.00 + > 10008.: (65.00115.00)
<pre>electromagnet>Volt: Del. quantity cm3/: > 1000s.:</pre>		Shutoff electromagnet:
6th speed 1/min: Shutoff		+ Cut-in + >min voltage : 10.0

Rated voltage : 12.0

Mounting and assembly dimensions:

Designation

K KF

MS SVS max.

Ya

mm: 3.2...3.4 mm: 5.5 mm: 0.6...1.0 mm: 6.0 mm: 36.5...38.5 mm: 43.9...49.1 Yb

:

Remarks:

Note inst. in remarks column

Test scheet Edition : 02.02.95

replaces

Calibrating oil : ISO-4113

: VE4/11F1250R613-1 Injection pump : 0 460 414 115 Type number

Customer Part-No. :

Customer-specific information Customer : IVECO-FIAT

: 8045.25.214 Engine

Power KW: 55 1/min: 1250 Speed

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 027

Opening

bar: 250.00...253.00 Pressure>

Perforated plate

mm: 0.5 diameter>

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Start of delivery

mm: 0.2 Prestroke

(from BDC): +-0.02(0.04)

Injection-pump setting values Test specifications in parentheses

Timing-device travel

Speed 1/min: 800 Setting value mm: 3.10...3.50

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 800 Speed

Setting value bar: 4.70...5.30

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

1/min: 750 Speed

Del. quantity cm3/ > 1000s.: 52.50...53.50

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 3.5 1000s.: (4.0)

Low-idle speed regulation

1/min: 350 Speed

Del. quantity cm3/ 1000s.: 6.00...10.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.5 1000s.: (3.5)

Full-load speed regulation

Speed 1/min: 1350

Del. quantity cm3/

1000s.: 37.00...41.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100 Del. quantity cm3/: 65.00...115.00

min 10005.: 90.00

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

1/min: 500 1st speed

mm: 0.20...1.00 TD travel mm: (0.00...1.30)

electromagnet>Volt: 12

1/min: 1250 2nd speed

mm: 6.90...7.50 TD travel mm: (6.50...7.90)

Shutoff

electromagnet>Volt: 12	† > 1000s.: (50.0056.00)
Complete management of the control o	6th speed 1/min: 400
Supply-pump pressure characteristic:	Shutoff
1st speed 1/min: 500	electromagnet>Volt: 12
1st speed	+ Del. quantity cm3/: 48.5051.50 + > 1000s.: (46.5053.50)
pressure> bar: 3.203.80	10003.: (40.5055.50)
Shutoff Shutoff	I
electromagnet>Volt: 12	Mech. shutoff:
2nd speed 1/min: 800	L Ticon. Shacorr.
Supply-pump -	1st speed
pressure> bar: 4.705.30 -	Del. quantity cm3/: 0.003.00
Shutoff	> 1000s.: -
electromagnet>Volt: 12 -	Shutoff
3rd speed 1/min: 1250 -	electromagnet>volt: 12
Supply-pump .	
pressure> bar: 6.907.50 -	- Electr. shutoff:
Shutoff	+
electromagnet>Volt: 12 -	1st speed 1/min: 350
And a manifest of second and a	Del. quantity cm3/: 0.003.00
Overlow quantity at overflow valve:	> 1000s.: -
Act and Almini 100	Shutoff
1st speed 1/min: 400 - Shutoff -	electromagnet>volt: -
electromagnet>Volt: 12	Idle delivery:
Overflow : 41.6086.10	L die delivery.
quantity> cm3/10s: (26.60101.10)	1st speed 1/min: 350
2nd speed 1/min: 1250	- Shutoff
Shutoff -	electromagnet>Volt: 12
electromagnet>Volt: 12	Del. quantity cm3/: 6.0010.00
Overflow : 55.00138.80 -	- > 1000S.: (4.0012.00)
quantity> cm3/10s: (40.00153.00)	Dispersion cm3/: 3.5
quartoto, one reconstruction	- > 1000s.: (3.5)
Delivery quant. and breakaway char.:	- 2nd speed 1/min: 450
-	Shutoff
	- electromagnet>Volt: 12
1nd speed 1/min: 1450 -	- Del. quantity_cm3/: 0.003.00
Shutoff -	- > 1000s.: -
electromagnet>Volt: 12	
Del. quantity cm3/: 0.003.00	- Automatic starting fuel delivery:
> 1000s.: -	4-4
2nd speed 1/min: 1400 -	- 1st speed 1/min: 250
Shutoff	- Shutoff
electromagnet Volt: 12 - Del. quantity cm3/: 5.0021.00 -	electromagnet>Volt: 12Del. quantity cm3/: 40.0060.00
> 1000s.: -	> 1000s.: (40.0060.00)
3rd speed 1/min: 1350	/ 10003 (40.0000.00)
Shutoff -	- 2nd speed 1/min: 150
electromagnet>Volt: 12	- Shutoff
Del. quantity cm3/: 37.0041.00	electromagnet>Volt: 12
> 1000s.: -	- Del. quantity cm3/: 75.00125.00
4th speed 1/min: 1250	- > 1000s.: (75.00125.00)
Shutoff	
electromagnet>Volt: 12	- 4th speed 1/min: 100
Del. quantity cm3/: 50.5053.50	- Shutoff
> 1000\$.: (49.0055.50)	electromagnet>Volt: 12
5th speed 1/min: 750	- Del. quantity cm3/: 65.00115.00
Shutoff	- > 1000s.: (65.00115.00)
electromagnet>Volt: 12	
Del quantity $cm3/\cdot 52.50 - 53.50$	Shirtoff electromagnet.

Cut-in

>min voltage : 10.0 Rated voltage : 12.0

Mounting and assembly dimensions:

Designation

K mm: KF mm: 5.3...5.7
MS mm: 1.4...1.8
SVS max. mm: 4.6
Ya mm: 37.9...39.9
Yb mm: 44.1...49.1

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor—head end

Note inst. in remarks column

Test scheet : FIA

Edition : 02.02.95

replaces

Calibrating oil : ISO-4113

: VE4/11F1900R444-1 Injection pump : 0 460 414 116 Type number

Customer Part-No. :

Customer-specific information Customer : IVECO-FIAT

: 8040.47.3700 Engine

KW: 85 **Power** 1/min: 1900 Speed

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 344

Calibrating-oil return>temp. > °C

with>thermometer>: 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 027 assembly>

Openina

bar: 250.00...253.00 Pressure>

Perforated plate

mm: 0.5 diameter>

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 450 x Length>

Start of delivery Prestroke 7m: --> (from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1200 Speed

Charge press. hPa: 1000

Setting value mm: 1.70...1.90

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1200 Speed Charge press hPa: 1000

Setting value bar: 5.70...6.30

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

1/min: 1400 Charge press. hPa: 1000

Del. quantity cm3/ > 1000s.: 55.50...56.50

Shutoff

electromagnet>Volt: 12 cm3/: 4.0 Dispersion 1000S.: (4.5)

Full-load del. w/out charge press.:

1/min: 550 Speed

Del. quantity cm3/ > 1000s.: 24.00...25.00

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

1/min: 325 Speed Charge press hPa: -

Del. quantity cm3/ > 1000s.: 8.00...12.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 6.0 1000s.: (6.5)

Full-load speed regulation

1/min: 2100 Speed Charge press hPa: 1000

Del. quantity cm3/

1000s.: 34.00...40.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100 Charge press hPa: -

Del. quantity cm3/: 40.00...90.00

mind> 1000s.: 65.00

Shutoff

electromagnet>Volt: 12

J23

	+ pressure> bar: 5.706.30
Load-dependent start of delivery:	+ Shutoff
Injqty.dif.measurement:	<pre>+ electromagnet>Volt: 12</pre>
	+ 3rd speed 1/min: 1900
Speed 1/min: 1400	+ Charge press. hPa: 1000
Charge press hPa: 1000	
trial ge press fira. 1000	+ Supply-pump
Injqty. cm3/	+ pressure> bar: 8.208.80
difference> 1000S.: -25.028.0 *	+ Shutoff
Shutoff	<pre>+ electromagnet>Volt: 12</pre>
electromagnet>Volt: 12	+
SP press.—dif.measurement	Overlow quantity at overflow valve:
or press, arrangement	Tovertow qualitity at over flow varve.
4 0000d 4/1 im. 4/00	T 4-4 4 / 700
1. Speed 1/min: 1400	+ 1st speed 1/min: 700
Charge press hPa: 1000	+ Charge press. hPa: 1000
Supply pump	+ Shutoff
pressure>	+ electromagnet>Volt: 12
difference> bar: -0.10.3 *	+ Overflow : 75.00119.40
	T 0VEITOW . 15.00117.40
Shutoff	+ quantity> cm3/10s: (60.00134.40)
electromagnet Volt: 12	+ 2nd speed 1/min: 1900
	+ Charge press. hPa: 1000
Inspection-pump test specifications	+ Shutoff
Test specifications in parentheses	+ electromagnet>Volt: 12
rest specifications in parentileses	+ Overflow : 97.20180.50
#!	
Timing-device characteristic:	+ quantity> cm3/10s: (82.20195.50)
	+
1st speed 1/min: 1100	<pre>Delivery—quant. and breakaway char.:</pre>
Charge press hPa: 1000	
	1
TD travel mm: 0.601.40	And speed 1/min. 700
	+ 1nd speed 1/min: 700
electromagnet>Volt: 12	+ Charge-air pressure-setting
2nd speed 1/min: 1200	+ point> hPa: 400
Charge press hPa: 1000	+ LDA-stroke mm: -
TD travel mm: 1.701.90	+ Shutoff
> mm: (1.102.50)	+ electromagnet>Volt: 12
	T electromagnet/volt. 12
Shutoff	+ Del. quantity cm3/: 43.0044.00
electromagnet>Volt: 12	+ > 1000s.: (39.5047.50)
3rd speed 1/min: 1600	+ 2nd speed 1/min: 2280
Charge press hPa: 1000	+ Charge press. hPa: 1000
TD travel mm: 3.904.70	+ Shutoff
> mm: (3.605.00)	+ electromagnet Volt: 12
	hal municipal and 7 00 7 00
Shutoff	+ Del. quantity cm3/: 0.003.00
electromagnet>Volt: 12	+ > 1000s.: -
4th speed 1/min: 1900	+ 3rd speed 1/min: 2200
Charge press hPa: 1000	+ Charge press. hPa: 1000
TD travel mm: 4.505.30	+ Shutoff
> mm: (4.205.60)	+ electromagnet>Volt: 12
Shutoff	+ Del. quantity cm3/: 12.0020.00
electromagnet>Volt: 12	† > 1000%.: (10.0022.00)
	+ 4th speed 4min: 2100
Supply-pump pressure characteristic:	+ Charge press. hPa: 1000
and the second of the second o	+ Shutoff
1st speed 1/min: 700	electromagnet>Volt: 12
Charge press. hPa: 1000	bel. quantity cm3/: 34.0040.00
Supply-pump	+ > 1000s.: (32.5041.50)
pressure> bar: 3.804.40	+ 5th speed 1/min: 1900
Shutoff	+ Charge press. hPa: 1000
electromagnet>Volt: 12	+ Shutoff
	electromagnet>Volt: 12
	T electrollagrativotti 12
Charge press. hPa: 1000	+ Del. quantity cm3/: 56.0061.00
Supply-pump	+ > 1000s.: (55.062.00)

6th speed 1/min: 1750 +	Charge press. hPa: 1000
Charge press. hPa: 1000	Injqty. cm3/ : -25.031.0 "
Charge press. Tra. 1000	1117. "QLY. UIID/ . "25.0."51.0
Shutoff	difference> 1000s.: (-24.032.0)"
electromagnet>Volt: 12	Shutoff
001 minutify on 71. EE EO 40 EO	
Del. quantity cm3/: 55.5060.50	electromagnet>Volt: 12_
> 1000S.: (54.5061.50) +	2nd speed 1/min: 1400
7th speed 1/min: 1400 +	Charge press. hPa: 1000
	charge press. IIFa. 1000
Charge press. hPa: 1000	Injqty. cm3/: 0.03.0 Z'
Shutoff	difference> 1000S.: -
	Chi-L-EE
electromagnet>Volt: 12	Shutoff
Del. quantity cm3/: 55.5056.50	electromagnet Volt: 12
> 1000s.: (52.5059.50) +	
	mana a la terr
8th speed 1/min: 1200 +	TD-travel dif.measurement:
Charge press. hPa: 1000	correttore anticipo iniezione (SV):
Shutoff +	1st speed 1/min: 1400
electromagnet>Volt: 12	Charge press. hPa: 1000
Del. quantity cm3/: 53.5058.50	TD-travel : -0.70.9 " difference> mm: -
T	10-11-avel0.10.9
> 1000s.: (52.0060.00) +	difference> mm: -
9th speed 1/min: 700 +	Shutoff
Charge press. hPa: 1000	electromagnet>Volt: 12
Shutoff +	2nd speed 1/min: 1400
electromagnet>Volt: 12	Charge press. hPa: 1000
T	cliative piess. Ilra. 1000
Del. quantity cm3/: 52.5061.50	TD-travel : -1.01.4 '
> 1000s.: (51.5062.50) +	
104h anned 1/min 550	Artematic atombios from John Stramer
10th speed 1/min: 550	Automatic starting fuel delivery:
Charge press. hPa: - +	
Shutoff	1st speed 1/min: 500
electromagnet>Volt: 12	Charge press. hPa: -
Del. quantity cm3/: 24.0025.00	Shutoff
4000c - (24 00 20 00)	
> 1000s.: (21.0028.00) +	electromagnet>Volt: 12
	Del. quantity cm3/: 14.0030.00
i de la companya de la companya de la companya de la companya de la companya de la companya de la companya de	> 1000s.: (14.0030.00)
<u>1</u>	
†	/ 10003 (14.0050.00/
‡	
Flectr. shutoff:	
Electr. shutoff:	2nd speed 1/min: 200
+	2nd speed 1/min: 200 Shutoff
+	2nd speed 1/min: 200 Shutoff
1st speed 1/min: 325	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: -	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: -	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: -	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: -	2nd speed
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: -	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: -	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00 > 1000S.: (55.00105.00) 4th speed 1/min: 100 Shutoff
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: -	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery:	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery:	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000s.: (6.0014.00)	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000s.: (6.0014.00)	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000s.: (6.0014.00) Dispersion cm3/: 6.5	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000S.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000S.: (6.0014.00) Dispersion cm3/: 6.5 > 1000S.: (6.5)	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000S.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000S.: (6.0014.00) Dispersion cm3/: 6.5 > 1000S.: (6.5) 2nd speed 1/min: 450	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000S.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000S.: (6.0014.00) Dispersion cm3/: 6.5 > 1000S.: (6.5) 2nd speed 1/min: 450	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000S.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000S.: (6.0014.00) Dispersion cm3/: 6.5 > 1000S.: (6.5) 2nd speed 1/min: 450 Shutoff	<pre>2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00</pre>
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000S.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000S.: (6.0014.00) Dispersion cm3/: 6.5 > 1000S.: (6.5) 2nd speed 1/min: 450 Shutoff electromagnet>Volt: 12	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00 > 1000S.: (55.00105.00) 4th speed 1/min: 100 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 40.0090.00 > 1000S.: (40.0090.00) Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions:
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000S.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000S.: (6.0014.00) Dispersion cm3/: 6.5 > 1000S.: (6.5) 2nd speed 1/min: 450 Shutoff electromagnet>Volt: 12	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00 > 1000S.: (55.00105.00) 4th speed 1/min: 100 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 40.0090.00 > 1000S.: (40.0090.00) Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions:
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000S.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000S.: (6.0014.00) Dispersion cm3/: 6.5 > 1000S.: (6.5) 2nd speed 1/min: 450 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00 > 1000S.: (55.00105.00) 4th speed 1/min: 100 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 40.0090.00 > 1000S.: (40.0090.00) Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000S.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000S.: (6.0014.00) Dispersion cm3/: 6.5 > 1000S.: (6.5) 2nd speed 1/min: 450 Shutoff electromagnet>Volt: 12	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00 > 1000S.: (55.00105.00) 4th speed 1/min: 100 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 40.0090.00 > 1000S.: (40.0090.00) Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation K mm: 3.23.4
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000s.: (6.0014.00) Dispersion cm3/: 6.5 > 1000s.: (6.5) 2nd speed 1/min: 450 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00 > 1000s.: -	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00 > 1000S.: (55.00105.00) 4th speed 1/min: 100 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 40.0090.00 > 1000S.: (40.0090.00) Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation K mm: 3.23.4 KF mm: KOT
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000s.: (6.0014.00) Dispersion cm3/: 6.5 > 1000s.: (6.5) 2nd speed 1/min: 450 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00 > 1000s.: -	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00 > 1000S.: (55.00105.00) 4th speed 1/min: 100 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 40.0090.00 > 1000S.: (40.0090.00) Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation K mm: 3.23.4 KF mm: KOT
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000s.: (6.0014.00) Dispersion cm3/: 6.5 > 1000s.: (6.5) 2nd speed 1/min: 450 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00 > 1000s.: - Load-dependent start of delivery:	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000s.: (6.0014.00) Dispersion cm3/: 6.5 > 1000s.: (6.5) 2nd speed 1/min: 450 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00 > 1000s.: -	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000s.: (6.0014.00) Dispersion cm3/: 6.5 > 1000s.: (6.5) 2nd speed 1/min: 450 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00 > 1000s.: - Load-dependent start of delivery:	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00 > 1000s.: - Shutoff electromagnet>volt: - Idle delivery: 1st speed 1/min: 325 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0012.00 > 1000s.: (6.0014.00) Dispersion cm3/: 6.5 > 1000s.: (6.5) 2nd speed 1/min: 450 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00 > 1000s.: - Load-dependent start of delivery:	2nd speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00

Yb

mm: 43.7...48.9

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position
Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor—head end

Pump with slave plunger

Z = Absolute delivery

Note inst. in remarks column

Test scheet

Edition : 31.01.95

replaces

Calibrating oil : ISO-4113

: VE4/11F1750R618 Injection pump Type number : 0 460 414 117

Customer Part-No. :

Customer-specific information Customer : IVECQ-FIAT

: 8040.SC27.02 AIFO Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 344

Calibrating oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 027 assembly>

Openina

Pressure> bar: 250.00...253.00

Perforated plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Start of delivery Prestroke mm: -(from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1400 Charge press. hPa: 1200 Setting value mm: 2.20...2.40

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1400 Charge press hPa: 1200

Setting value bar: 6.90...7.50

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

1/min: 1000 Speed Charge press. hPa: 1200

Del. quantity cm3/ > 1000s.: 45.50...46.50

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 4.0 1000s.: (4.5)

Full-load del. w/out charge press.:

1/min: 550 Speed Del. quantity cm3/

1000s.: 26.00...27.00 >

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

Speed 1/min: 325 Charge press hPa: -Del. quantity cm3/ > 1000s.: 10.00...14.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 6.0 > 1000s.: (6.5)

Full-load speed regulation

1/min: 1900 Speed Charge press hPa: 1200

Del. quantity cm3/

1000s.: 23.00...27.00

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100 Speed Charge press hPa: -

Del. quantity cm3/: 40.00...90.00

1000s.: 65.00 mind>

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

	+ 3rd speed 1/min: 1750
Speed 1/min: 1400	Charge press. hPa: 1200
Charge press hPa: 1200	+ Supply-pump
Injqty. cm3/	+ pressure> bar: 8.409.00
difference> 1000s.: -19.021.0 *	+ Shutoff
Shutoff	+ electromagnet>Volt: 12
electromagnet>Volt: 12	+
SP press.—dif.measurement	+ Overlow quantity at overflow valve:
1.Speed 1/min: 1400	1st speed 1/min: 700
Charge press hPa: 1200	Charge press. hPa: 1200
Supply pump	+ Shutoff
pressure>	+ electromagnet>Volt: 12
difference> bar: -0.10.3 *	+ Overflow : 75.00119.40
Shutoff	quantity> cm3/10s: (60.00134.40)
electromagnet Volt: 12	+ 2nd speed 1/min: 1750
Topostion were test specifications	+ Charge press. hPa: 1200 + Shutoff
Inspection-pump test specifications Test specifications in parentheses	F electromagnet>Volt: 12
rest specifications in parentheses	Overflow : 97.20180.50
Timing-device characteristic:	+ quantity> cm3/10s: (82.20195.50)
	+
1st speed 1/min: 1250	† Delivery-quant. and breakaway char.:
Charge press hPa: 1200	+
TD travel mm: 1.101.70 > mm: (0.702.10)	1nd speed 1/min: 800
electromagnet>Volt: 12	Charge air pressure setting
2nd speed 1/min: 1400	+ point> hPa: 350
Charge press hPa: 1200	+ LDA-stroke mm: -
TD travel mm: 2.202.40	+ Shutoff
> mm: (1.603.00)	+ electromagnet>Volt: 12
Shutoff	- Del. quantity cm3/: 39.0040.00
electromagnet>Volt: 12	† > 1000s.: (36.0043.00)
3rd speed 1/min: 1600 Charge press hPa: 1200	+ 2nd speed 1/min: 2000
Charge press hPa: 1200 TD travel mm: 3.103.70	+ Charge press. hPa: 1200 + Shutoff
> mm: (2.704.10)	electromagnet Volt: 12
Shutoff	Pel. quantity cm3/: 0.003.00
electromagnet>Volt: 12	+ > 1000s.: -
4th speed 1/min: 1750	+ 3rd speed 1/min: 1900
Charge press hPa: 1200	+ Charge press. hPa: 1200
TD travel mm: 3.804.40	+ Shutoff
> mm: (3.404.80)	+ electromagnet>Volt: 12
Shutoff electromagnet>Volt: 12	+ Del. quantity cm3/: 23.0027.00 + > 1000S.: (20.5029.50)
etecti dilagret/ott. 12	4th speed 1/min: 1825
Supply-pump pressure characteristic:	Charge press. hPa: 1200
and the second and account to the	Shutoff
1st speed 1/min: 800	+ electromagnet>Volt: 12
Charge press. hPa: 1200	+ Del. quantity cm3/: 38.0046.00
Supply-pump	+ > 1000s.: (36.0048.00)
pressure> bar: 4.204.80 Shutoff	+ 5th speed 1/min: 1750 + Charge press. hPa: 1200
electromagnet>Volt: 12	+ Shutoff
2nd speed 1/min: 1400	electromagnet>Volt: 12
Charge press. hPa: 1200	Del. quantity cm3/: 45.5050.50
Supply-pump	+ > 1000s.: (44.551.50)
pressure> bar: 6.907.50	+ 6th speed 1/min: 1000
Shutoff	Charge press. hPa: 1200
electromagnet>Volt: 12	+ Shutoff

electromagnet>Volt: 12	- Shutoff
Del. quantity cm3/: 46.5047.50	- electromagnet Volt: 12
> 1000s.: (43.5050.50) 7th speed 1/min: 800	- - TD-travel dif.measurement:
Charge press. hPa: -	- correttore anticipo iniezione (SV):
Shutoff	- 1st speed 1/min: 1400
electromagnet>Volt: 12	- Charge press. hPa: 1200
Del. quantity cm3/: 26.5031.50 + 1000s.: (25.5032.50)	TD-travel : -0.50.7" difference> mm: -
8th speed 1/min: 800	- Shutoff
Charge press. hPa: 1200	- electromagnet>Volt: 12
Shutoff	- 2nd speed 1/min: 1400
electromagnet>Volt: 12 + Del. quantity cm3/: 44.5053.50 + Del. quantity cm3/: 44.5053.50	- Charge press. hPa: 1200 - TD-travel : -0.81.6 '
> 1000s.: (43.5054.50)	•
9th speed 1/min: 550	- Automatic starting fuel delivery:
Charge press. hPa: -	. Act analy 1/min 500
Shutoff electromagnet>Volt: 12	- 1st speed 1/min: 500 - Charge press. hPa: -
Del. quantity cm3/: 26.0027.00	- Shutoff
> 1000s.: (23.0029.00)	electromagnet>Volt: 12
†	- Del. quantity cm3/: 14.0030.00 - > 1000s.: (14.0030.00)
I	. / 10005.: (14.0050.00)
Electr. shutoff:	- 2nd speed 1/min: 200
†	Shutoff
1st speed 1/min: 325 Del. quantity cm3/: 0.003.00	electromagnet>Volt: 12 Del. quantity cm3/: 55.00105.00
> 1000s.: -	> 1000s.: (55.00105.00)
Shutoff	•
electromagnet>volt:	4th speed 1/min: 100
Idle delivery:	Shutoff electromagnet>Volt: 12
Tate decivery.	Del. quantity cm3/: 40.0090.00
1st speed	> 1000s.: (40.0090.00)
Shutoff	Charles & C. T. T. T. T. T. T. T. T. T. T. T. T. T.
electromagnet>Volt: 12 Del. quantity cm3/: 10.0014.00	Shutoff electromagnet:
> 1000s.: (8.0016.00)	Cut-in
Dispersion cm3/: 6.5	>min voltage : 10.0
> 1000s.: (6.5)	Rated voltage : 12.0
2nd speed 1/min: 450	Mounting and assembly dimensions:
electromagnet>Volt: 12	
Del. quantity cm3/: 0.003.00 +	Designation
> 1000s.: -	K mm: K1
Load-dependent start of delivery:	KF mm: - MS1 mm: 1.31.6
Injqty.dif.measurement:	SVS max. mm: -
+	LDA stroke mm: -
1st speed 1/min: 1400 +	Ya mm: 37.939.9
Charge press. hPa: 1200 Injqty. cm3/ : -19.025.0 "	Yb mm: 39.644.6
difference> 1000s.: (-18.026.0)"	Remarks:
Shutoff	•
electromagnet>Volt: 12	Va a Bintana hat a va Ua Cl
2nd speed 1/min: 1400 Charge press. hPa: 1200	Ya = Distance between VE flange and speed-control lever in idle
Inj.—qty. cm3/: 0.03.0 Z'	position
difference> 1000S.: -	Measurement point = edge of control

lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

Note inst. in remarks column

Test scheet Edition : 31.01.95

replaces

Calibrating oil : ISO-4113

: VE4/11F2250L619 Injection pump : 0 460 414 118 Type number

Customer Part-No. :

Customer-specific information Customer : ROVER

: TCI-EM Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 344

Calibrating-oil return>temp. > °C

with>thermometer> : 54.00...56.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 116

Opening |

bar: 207.00...210.00 Pressure>

Perforated plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 450 x Length>

Start of delivery Prestroke mm: -(from BDC): -

Start of delivery block Piston stroke mm: 0.55

mm: +-0.02(0.06)

: A Outlet >

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1000 Speed Charge press. hPa: 1500

Setting value mm: 7.20...7.60

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1000 Speed Charge press hPa: 1500

Setting value bar: 6.70...7.30

electromagnet>Volt: 12

Full-load del. with charge press.:

1/min: 1250 Speed Charge press. hPa: 1500 Del. quantity cm3/

1000s.: 63.00...64.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 3.01000S .: (4.0)

Full-load del. w/out charge press.:

Speed 1/min: 700

Del. quantity cm3/

1000s.: 42.00...43.00

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

Speed 1/min: 375 Charge press hPa: -Del. quantity cm3/

1000s.: 6.00...10.00 >

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 4.0 > 1000s.: (4.5)

Full-load speed regulation

Speed 1/min: 2580 Charge press hPa: 1500

Del. quantity cm3/

1000s.: 18.00...22.00

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100 Speed Charge press hPa: -

Del. quantity cm3/: 89.0...91.0 "V" mind> 1000S.: 81.50

mind>

Shutoff

electromagnet>Volt:	12 +		
_	+	1st speed 1/min:	700
Inspection pump test	t specifications +	Charge press. hPa:	
Test specifications		Shutoff	
		electromagnet>Volt:	12
Timing-device charac	teristic:	Overflow :	41 60 122 20
rumming device endicate	1	quantity> cm3/10s:	
1st speed 1/min:	enn I	2nd speed 1/min:	
		Charge press. hPa:	1500
TD travel mm:	(5.70 7.50)	Shutoff	42
> mm:	(5.707.50)	electromagnet>Volt:	12 00 475 00
electromagnet>Volt:	12 +	Overflow :	03.80(75.00
2nd speed 1/min:	1000 +	quantity> cm3/10s:	(48.80190.00)
Charge press hPa:			
	7.207.60	Delivery-quant. and	breakaway char.:
	(6.608.20)		
Shutoff	+		
electromagnet>Volt:	12 +	1nd speed 1/min:	1000
3rd speed 1/min:	1400	Charge-air pressure	
Charge press hPa:	1500	point> hPa:	500
TD travel mm:	8.30 9.10	LDA-stroke mm:	
TD travel mm:	(7.809.60)	Shutoff	
Shutoff	1	electromagnet>Volt:	12
	12 T	Dol munitime on 7/1	£2 00 £3 00
electromagnet>Volt:	2000	Del. quantity cm3/:	32.0033.00 (10.70 FF 70)
4th speed 1/min:	4500	> 1000s.:	(49.3055.70)
Charge press hPa:	1500	2nd speed 1/min:	
TD travel mm: > mm:	9.5010.10	Charge press. hPa:	1500
	- +	Shutoff	
Shutoff	+	electromagnet Volt:	12
electromagnet>Volt:	12 +	Del. quantity cm3/:	0.003.00
5th speed 1/min:	2000 ÷	> 1000s.:	-
Charge press. hPa:		3rd speed 1/min:	2580
TD travel mm:	0.00.6	Charge press. hPa:	
> mm:		Shutoff	
Timing valve Volt:		electromagnet>Volt:	12
Shutoff	1	Del. quantity cm3/:	18 nn 22 nn
electromagnet>Volt:	12 I	> 1000s.:	(15.0025.00)
etectrollagiet/vott.	T	4th speed 1/min:	
Complete many management	ahamaatamiatia. T		
Supply-pump pressure	characteristic:	Charge press. hPa:	1500
4 1 44.	·	Shutoff	40
1st speed 1/min:		electromagnet>Volt:	12
Charge press. hPa:	1500 +	Del. quantity cm3/:	
Supply-pump	+		(41.0053.00)
pressure> bar:	6.407.00	5th speed 1/min:	
Shutoff	+	Charge press. hPa:	1500
electromagnet>Volt:	12 🗼	Shutoff	
2nd speed 1/min:		electromagnet>Volt:	12
Charge press. hPa:		Del. quantity cm3/:	58.5062.50
Supply-pump	1	> 1000s.:	_
	7.207.80	6th speed 1/min:	
Shutoff	I	Charge press. hPa:	
electromagnet>Volt:	12	Shutoff	1500
			10
3rd speed 1/min:		electromagnet>Volt:	
Charge press. hPa:	1500 +	Del. quantity cm3/:	58.5061.50
Supply-pump	, 70 7 7 7		(56.5063.50)
	6.707.30	7th speed 1/min:	
Shutoff	+	Charge press. hPa:	1500
electromagnet>Volt:	12 +	Shutoff	
_	+	<pre>electromagnet>Volt:</pre>	12
Overlow quantity at	overflow valve:	Del. quantity cm3/:	

1000s.: (60.70...66.30) 1/min: 1000 1000s.: (42.50...57.50) 8th speed Charge press. hPa: 1500 4th speed 1/min: 100 Shutoff Charge press. hPa: electromagnet>Volt: 12 Shutoff Del. quantity cm3/: 66.00...71.00 > 1000s.: (64.50...72.50) 9th speed 1/min: 700 electromagnet>Volt: 12 Del. quantity cm3/: 89.0...91.0 "V" > 1000s.: (81.50...98.50) Charge press. hPa: -Shutoff Shutoff electromagnet: electromagnet>Volt: 12 Del. quantity cm3/: 42.00...43.00 Cut-in 1000s.: (39.30...45.70) >min voltage : 10.0 : 12.0 Rated voltage Mounting and assembly dimensions: Electr. shutoff: Designation mm: 3.2...3.4 1st speed 1/min: 375 K Del. quantity cm3/: 0.00...3.00 KF mm: KOT 1000s.: -MS mm: mm: 3.5 Shutoff SVS max. mm: 35.8...39.8 mm: 55.1...64.9 electromagnet>volt: -Ya Yb Idle delivery: Remarks: 1st speed 1/min: 375 : Shutoff electromagnet>Volt: 12 Ya = Distance between VE flange and Del. quantity cm3/: 6.00...10.00 speed-control lever in idle 1000s.: (4.00...12.00) position Dispersion cm3/: 4.0Measurement point = edge of control 1000s.: (4.5) Lever on drive end 2nd speed 1/min: 450 Shutoff electromagnet>Volt: 12 Yb = Distance between VE flange and Del. quantity cm3/: 0.00...3.00 > 1000s.: speed-control lever in rated speed Measurement point = edge of control Automatic starting fuel delivery: lever on distributor head end 1st speed 1/min: 320 Charge press. hPa: -Shutoff Starting delivery check V = Speed-control lever in full-load electromagnet>Volt: 12 Del. quantity cm3/: 25.00...65.00 1000s.: (25.00...65.00) position 1/min: 100 2nd speed Starting delivery check L = Speed-control lever in idle Charge press. hPa: -Shutoff electromagnet>Volt: 12 position Del. quantity cm3/: 85.00...135.00 1000s.: (85.00...135.00) 1/min: 100 3rd speed Charge press. hPa: -Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 49.0...51.0 "L"

Note inst. in remarks column

: FOR Test scheet Edition : 31.01.95

replaces

Calibrating oil : ISO-4113

: VE4/11F2000R624 Injection pump : 0 460 414 119 Type number

Customer Part-No. :

Customer-specific information

Customer FORD

Engine : 2.5 DI

Power KW: 57 1/min: 2000 Speed

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 344

Calibrating oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 114 assembly>

Opening |

bar: 207.00...210.00 Pressure>

Perforated-plate

diameter> mm: 0.4

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 450 x Length>

Start of delivery Prestroke mm: -(from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1250 Speed

Setting value mm: 2.60...2.80

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1250 Speed

Setting value bar: 6.90...7.50

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

1/min: 500 Del. quantity cm3/

1000s.: 25.30...25.70 F

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

Speed 1/min: 425 Charge press hPa: -

Del. quantity cm3/ > 1000s.: 6.00...8.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.0 > 1000s.: (4.0)

Full-load speed regulation

1/min: 2200

Del. quantity cm3/

1000s.: 22.00...24.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 3.0 1000s.: (4.0)

Start:

1/min: 100 Speed Charge press hPa: -

Del. quantity cm3/: 26.00...66.00

1000s.: 26.00 mind>

Shutoff

electromagnet>Volt: 12

Inspection pump test specifications Test specifications in parentheses

Timing-device characteristic:

1/min: 800 1st speed

mm: 0.50...1.30 TD travel mm: (0.20...1.60)

electromagnet>Volt: 12

1/min: 1200 2nd speed

mm: 2.60...2.80 TD travel

	> men:	(2.203.20)	Shutoff
	Shutoff	1	electromagnet>Volt: 12
		12	Not supporting on 7/2 24 50 72 50
	electromagnet>Volt:	2000	Del. quantity cm3/: 26.5032.50
	3rd speed 1/min:	4	> 1000s.: (23.5035.50)
	TD travel mm:	4.905.70	4th speed 1/min: 1950
	> mm:	(4.606.00)	Shutoff
	Shutoff	1	electromagnet>Volt: 12
	electromagnet>Volt:	12	Del. quantity cm3/: 35.838.2 D
	etectrollagnet/vott:	1 ² T	
		†	> 1000s.: (34.5039.50) D
	Supply-pump pressure	e characteristic:	5th speed 1/min: 1700
		1	Shutoff
:	1st speed 1/min:	sm 1	electromagnet>Volt: 12
		7 T	0.1 months on 7/2 7/ 70 70 70
	Supply-pump	· · · · · · · · · · · · · · · · · ·	Del. quantity cm3/: 36.3038.70
	pressure> bar:	5.205.80	> 1000s.: (35.040.00)
	Shutoff	+	6th speed 1/min: 1000
	electromagnet>Volt:	12	Shutoff
	2nd speed 1/min:		
		1000	electromagnet>Volt: 12
	Supply-pump	†	Del. quantity cm3/: 33.534.5 E
	pressure> bar:	6.407.00	> 1000s.: (31.536.5) E
	Shutoff	1	7th speed 1/min: 500
	electromagnet>Volt:	12	Shutoff
	2nd annual 4/min.	1250 T	
	3rd speed 1/min:	120 †	electromagnet>Volt: 12
	Supply-pump	+	Del. quantity cm3/: 25.325.7 F
	pressure> bar:	6.907.50	> 1000s.: (22.528.5) F
	Shutoff	1	
	electromagnet>Volt:	12	
	the speed 4/min	Ť T	
	4th speed 1/min:	2000 +	
	Supply-pump	+	Electr. shutoff:
	pressure> bar:	8.69.2	
	Shutoff	1	1st speed 1/min: 425
		42 T	15t Speed 1/111(1: 42)
	electromagnet>Volt:	12 +	Del. quantity cm3/: 0.003.00
		+	> 1000s.: -
	Overlow quantity at	overflow valve: +	Shutoff
	4		electromagnet>volt: -
	1st speed 1/min:	500	cecoti diagnet vote.
		700 T	Tall a shall be carried
	Shutoff	t	Idle delivery:
	electromagnet>Volt:		
	Overflow:	97.20141.60	1st speed 1/min: 425
	quantity> cm3/10s:	(82.20156.60)	Shutoff
	2nd speed 1/min:	1050	electromagnet>Volt: 12
	Chuse SE	T 7	bel mandide and/2 / 00 9 00
	Shutoff	†	Del. quantity cm3/: 6.008.00
	electromagnet>Volt:		> 1000s.: (3.0011.00)
	Overflow:	115.2184.70	Dispersion cm3/: 3.0
	quantity> cm3/10s:		> 1000s.: (4.0)
	qualities of the second		2nd speed 1/min: 500
	No. discourse as a second	handler in the T	
	Delivery-quant. and	breakaway char.:	Shutoff
		+	electromagnet>Volt: 12
		+	Del. quantity cm3/: 0.006.00
	1nd speed 1/min:	2400 1	> 10 0 0s.: -
		•	70000
			Book hand dat he 7md for a man.
	Shutoff	. t	Part-load del.at 3rd injqty.
	electromagnet>Volt:		terza fermo della portata
	Del. quantity cm3/:		stop (EGR set)
	> 1000s.:		scarico) (ARF)
		έ ζ ω †	gaz d'échappement-ARF)
	Shutoff	. +	Spacing mm: 20.0
	electromagnet Volt:	12 +	
	Del. quantity cm3/:		1st speed
	> 1000s.:	(19.028.0)	Shutoff
	3rd speed 1/min:	C140 +	electromagnet>Volt: 12

```
Del. quantity cm3/: 20.8...21.8
              1000s.: (18.8...23.8)
Automatic starting fuel delivery:
1st speed
               1/min: 480
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 19.00...29.00
> 1000s.: (19.00...29.00)
               1/min: 300
2nd speed
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 26.00...56.00
              1000s.: (26.00...56.00)
              1/min: 100
4th speed
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 26.00...66.00
              1000s.: (26.00...66.00)
Shutoff electromagnet:
Cut-in
>min voltage
                    : 10.0
                    : 12.0
Rated voltage
Mounting and assembly dimensions:
Designation
                  mm: 2.7...2.9
KF
                 mm: KOT
                 mm: 1.6...2.0
mm: 42.8...45.8
mm: 59.5...71.5
MS
Ya
Yb
Remarks:
Ya = Distance between VE flange and
speed-control lever in idle
position
Measurement point = edge of control
lever on drive end
Yb = Distance between VE flange and
speed-control lever in rated speed
position
Measurement point = edge of control
lever on distributor-head end
Permissible port/port scatter with
stop test, electrical = max. 5.0 ccm/1000 S.
```

Note inst. in remarks column

Test scheet

Edition : 31.01.95

replaces

: ISO-4113 Calibrating oil

Injection pump : VE4/11F1900R542-1 : 0 460 414 120

Type number Customer Part-No. :

Customer-specific information

Customer : IVECO-FIAT

: 8040.47.2200 Engine

KW: 85 Power Speed 1/min: 1900

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 344

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 027 assembly>

Opening

bar: 250.00...253.00 Pressure>

Perforated-plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Start of delivery Prestroke mm: -(from BDC): -

Injection pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1200 Speed

KD9

Charge press. hPa: 1000

Setting value mm: 1.70...1.90

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1200

Charge press hPa: 1000 Setting value bar: 5.70...6.30

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

1/min: 1400 Charge press. hPa: 1000 Del. quantity cm3/

1000s.: 55.50...56.50

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 4.0 1000s.: (4.5)

Full-load del. w/out charge press.:

1/min: 550 Speed

Del. quantity cm3/

1000s.: 24.00...25.00

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

1/min: 325 Speed Charge press hPa: -

Del. quantity cm3/ > 1000s.: 8.00...12.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 6.0 > 1000s.: (6.5)

Full-load speed regulation

1/min: 2100 Charge press hPa: 1000

Del. quantity cm3/

1000s.: 34.00...41.00

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100 Speed

Charge press hPa: -

Del. quantity cm3/: 40.00...90.00

1000s.: 65.00 mind>

Shutoff

electromagnet>Volt: 12

	+ pressure> bar: 5.706.30
Load-dependent start of delivery:	+ Shutoff
Inj.—qty.dif.measurement:	+ electromagnet>Volt: 12
	+ 3rd speed 1/min: 1900
Speed 1/min: 1400	+ Charge press. hPa: 1000
Charge press hPa: 1000	+ Supply-pump
Iniaty. cm3/	+ pressure> bar: 8.208.80
difference> 1000S.: -25.028.0 *	+ Shutoff
Shutoff	+ electromagnet>Volt: 12
electromagnet>Volt: 12	+
SP press.—dif.measurement	Overlow quantity at overflow valve:
	+
1.Speed 1/min: 1400	+ 1st speed 1/min: 700
Charge press hPa: 1000	+ Charge press. hPa: 1000
Supply pump	+ Shutoff
pressure>	+ electromagnet>Volt: 12
difference> bar: -0.10.3 *	+ Overflow : 75.00119.40
Shutoff	+ quantity> cm3/10s: (60.00134.40)
electromagnet Volt: 12	+ 2nd speed 1/min: 1900
	+ Charge press. hPa: 1000
Inspection-pump test specifications	+ Shutoff
Test specifications in parentheses	+ electromagnet>Volt: 12
	+ Overflow : 97.20180.50
Timing device characteristic:	+ quantity> cm3/10s: (82.20195.50)
4	+
1st speed 1/min: 1100	+ Delivery-quant. and breakaway char.:
Charge press hPa: 1000	†
TD travel mm: 0.601.40 > mm: (0.301.70)	† 4
	1nd speed 1/min: 700
electromagnet>Volt: 12	+ Charge-air pressure-setting
2nd speed 1/min: 1200	+ point> hPa: 400
Charge press hPa: 1000	+ LDA-stroke mm: -
TD travel mm: 1.701.90	+ Shutoff
> mm: (1.102.50)	+ electromagnet>Volt: 12
Shutoff	† Del. quantity cm3/: 43.0044.00
electromagnet>Volt: 12	+ > 1000s.: (39.5047.50)
3rd speed 1/min: 1600	+ 2nd speed 1/min: 2280
Charge press hPa: 1000 TD travel mm: 3.904.70	+ Charge press. hPa: 1000 + Shutoff
	+ electromagnet Volt: 12
> mm: (3.605.00) Shutoff	+ Del. quantity cm3/: 0.003.00
electromagnet>Volt: 12	+ > 1000s.: -
4th speed 1/min: 1900	3rd speed 1/min: 2200
Charge press hPa: 1000	Charge press. hPa: 1000
TD travel mm: 4.505.30	- Shutoff
> mm: (4.205.60)	electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 12.0020.00
electromagnet>Volt: 12	+ > 1000s.: (10.0022.00)
c cecti dilagi ce voce. The	+ 4th speed 1/min: 2100
Supply-pump pressure characteristic:	Charge press. hPa: 1000
supply party pressure undraced rector	+ Shutoff
1st speed 1/min: 700	electromagnet>Volt: 12
Charge press. hPa: 1000	Del. quantity cm3/: 34.0040.00
Supply-pump	+ > 1000s.: (32.5041.50)
pressure> bar: 3.804.40	+ 5th speed 1/min: 1900
Shutoff	Charge press. hPa: 1000
electromagnet>Volt: 12	+ Shutoff
2nd speed 1/min: 1200	+ electromagnet>Volt: 12
Charge press. hPa: 1000	Del. quantity cm3/: 56.0061.00
Supply-pump	+ > 1000S.: (55.062.00)
	100001. 1001001

6th speed 1/min: 1750	+ Charge press. hPa: 1000
Charge press. hPa: 1000	+ Injqty. cm3/ : -25.031.0 "
Shutoff electromagnet>Volt: 12	+ difference> 1000s.: (-24.032.0)" + Shutoff
Del. quantity cm3/: 55.5060.50	+ electromagnet>Volt: 12
> 1000s.: (54.5061.50) 7th speed 1/min: 1400	+ 2nd speed 1/min: 1400 + Charge press. hPa: 1000
Charge press. hPa: 1000	Inj.—qty. cm3/: 0.03.0 Z'
Shutoff	+ difference> 1000s.: -
electromagnet>Volt: 12 Del. quantity cm3/: 55.5056.50	+ Shutoff + electromagnet Volt: 12
> 1000s.: (52.5059.50)	+
8th speed 1/min: 1200	+ TD-travel dif.measurement:
Charge press. hPa: 1000 Shutoff	+ correttore anticipo iniezione (SV): + 1st speed 1/min: 1400
electromagnet>Volt: 12	+ Charge press, hPa: 1000
Del. quantity cm3/: 53.5058.50 > 1000s.: (52.0060.00)	TD-travel : -0.70.9 " difference> mm: -
9th speed 1/min: 700	- Shutoff
Charge press. hPa: 1000	+ electromagnet>Volt: 12
Shutoff electromagnet>Volt: 12	2nd speed 1/min: 1400 Charge press. hPa: 1000
Del. quantity cm3/: 52.5061.50	TD-travel : -1.01.4
> 1000s.: (51.5062.50) 10th speed 1/min: 550	Automotic stanting fuel delivery
Charge press. hPa: -	Automatic starting fuel delivery:
Shutoff	1st speed 1/min: 500
electromagnet>Volt: 12 Del. quantity cm3/: 24.0025.00	+ Charge press. hPa: - + Shutoff
> 10005.: (21.0028.00)	+ electromagnet>Volt: 12
•	Del. quantity cm3/: 14.0030.00 > 1000s.: (14.0030.00)
	_
Electr. shutoff:	- 2nd speed 1/min: 200 - Shutoff
1st speed 1/min: 325	+ electromagnet>Volt: 12
Del. quantity cm3/: 0.003.00 > 1000s.: -	Del. quantity cm3/: 55.00105.00 + > 1000s.: (55.00105.00)
Shutoff	10005.: (55.00105.00)
electromagnet>volt: -	4th speed 1/min: 100 Shutoff
Idle delivery:	+ electromagnet>Volt: 12
1st speed 1/min: 325	Del. quantity cm3/: 40.0090.00 > 1000s.: (40.0090.00)
Shutoff	+
electromagnet>Volt: 12	Shutoff electromagnet:
> 1000s.: (6.0014.00)	Cut-in
Dispersion cm3/: 6.5	min voltage : 10.0
> 1000\$.: (6.5) 2nd speed 1/min: 450	Rated voltage : 12.0
Shutoff -	Mounting and assembly dimensions:
electromagnet>Volt: 12	Decignation
Del. quantity cm3/: 0.003.00 1000S.:	+ Designation + K mm: 3.23.4
•	KF mm: KOT
Load-dependent start of delivery: Injqty.dif.measurement:	MS1 mm: 1.61.9 SVS max. mm: -
•	LDA stroke mm: -
1st speed 1/min: 1400 -	Ya mm: 37.939.9

Yb

mm: 43.7...48.9

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Pump with slave plunger

Z = Absolute delivery

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : 30.01.95 Edition

replaces Calibrating oil : ISO-4113

: VE4/11F1900R494-1 Injection pump : 0 460 414 121 Type number

Customer Part-No. :

Customer-specific information Customer : IVECO-FIAT

: 8040.47.2585 Engine

KW: 85 Power 1/min: 1900 Speed

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 344

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 027 assembly>

Openina

bar: 250.00...253.00 Pressure>

Perforated-plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 450 x Length>

Start of delivery Prestroke mm: -> (from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1200 Speed

Charge press. hPa: 1000 Setting value mm: 1.70...1.90

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1200 Charge press hPa: 1000 Setting value bar: 5.70...6.30

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

1/min: 1400 Charge press. hPa: 1000

Del. quantity cm3/ > 1000s.: 56.00...57.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 4.0 1000s.: (4.5)

Full-load del. w/out charge press.:

Speed 1/min: 550 Del. quantity cm3/

1000s.: 24.00...25.00

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

1/min: 325 Speed Charge press hPa: -Del. quantity cm3/

1000s.: 8.00...12.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 6.0 > 1000s.: (6.5)

Full-load speed regulation

1/min: 2100 Charge press hPa: 1000

Del. quantity cm3/

1000s.: 34.00...41.00

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100 Speed Charge press hPa: -

Del. quantity cm3/: 40.00...90.00

mind> 1000s.: 65.00

Shutoff

electromagnet>Volt: 12

•	+ pressure> bar: 5.706.30
Load-dependent start of delivery:	
Injqty.dif.measurement:	electromagnet>Volt: 12
and the second s	3rd speed 1/min: 1900
Speed 1/min: 1400	Charge press. hPa: 1000
Charge press hPa: 1000	+ Supply-pump
Injqty. cm3/	pressure> bar: 8.208.80
difference> 1000s.: -25.028.0 *	+ Shutoff
Shutoff -	electromagnet>Volt: 12
electromagnet>Volt: 12	1
SP press.—dif.measurement	Overlow quantity at overflow valve:
of press. at timeasar cheft	L Over ton quarterty at over ton valve.
4 Smood 4/min. 4/00	Ant mond Africa 700
1. Speed 1/min: 1400 -	1st speed 1/min: 700
Charge press hPa: 1000 -	Charge press. hPa: 1000
Supply pump -	+ Shutoff
pressure>	electromagnet>Volt: 12
difference bar: -0.10.3 *	Overflow : 75.00119.40
Shutoff	quantity> cm3/10s: (60.00134.40)
electromagnet Volt: 12	2nd speed 1/min: 1900
•	Charge press. hPa: 1000
Inspection-pump test specifications -	- Shutoff
Test specifications in parentheses -	electromagnet>Volt: 12
•	- Overflow : 97.20180.50
Timing-device characteristic:	quantity> cm3/10s: (82.20195.50)
Thinks device characteristic.	qualitity clib/105. (02.20193.30)
A=4 = = = 4 (= 2 = 4400	
1st speed 1/min: 1100 -	Delivery-quant. and breakaway char.:
Charge press hPa: 1000 -	-
TD travel mm: 0.601.40	-
> mm: (0.301.70)	Ind speed 1/min: 700
electromagnet>Volt: 12	Charge air pressure setting
2nd speed 1/min: 1200	point> hPa: 400
Charge press hPa: 1000	- LDA-stroke mm: -
TD travel mm: 1.701.90 -	- Shutoff
> mm: (1.102.50) -	electromagnet>Volt: 12
Shutoff -	Del. quantity cm3/: 43.0044.00
electromagnet>Volt: 12	> 1000s.: (39.5047.50)
3rd speed 1/min: 1600 -	2nd speed 1/min: 2280
	Charge press. hPa: 1000
Charge press hPa: 1000	
TD travel mm: 3.904.70	- Shutoff
> mm: (3.605.00)	electromagnet Volt: 12
Shutoff	- Del. quantity cm3/: 0.003.00
electromagnet>Volt: 12	- > 1000s.: -
4th speed 1/min: 1900	- 3rd speed 1/min: 2200
Charge press hPa: 1000	Charge press. hPa: 1000
TD travel mm: 4.505.30	- Shutoff
> mm: (4.205.60)	electromagnet>Volt: 12
Shutoff	- Del. quantity cm3/: 12.0020.00
electromagnet>Volt: 12	- > 1000s.: (10.0022.00)
	- 4th speed 1/min: 2100
Supply-pump pressure characteristic:	- Charge press. hPa: 1000
	- Shutoff
1st speed 1/min: 700	
	electromagnet>Volt: 12
Charge press. hPa: 1000	Del. quantity cm3/: 34.0040.00
Supply-pump	- > 1000s.: (32.5041.50)
pressure> bar: 3.804.40	- 5th speed 1/min: 1900
Shutoir	- Charge press. hPa: 1000
Shutoff electromagnet>Volt: 12	- Charge press. hPa: 1000 - Shutoff
electromagnet>Volt: 12	- Shutoff
electromagnet>Volt: 12 - 2nd speed 1/min: 1200 -	Shutoffelectromagnet>Volt: 12
electromagnet>Volt: 12	- Shutoff

6th speed 1/min: 1750	+ Charge press. hPa: 1000
Charge press. hPa: 1000	+ Iniatv. cm3/ : -25.031.0 "
Shutoff	+ Injqty. cm3/ : -25.031.0 " + difference> 1000s.: (-24.032.0)"
electromagnet>Volt: 12	+ Shutoff
Del. quantity cm3/: 55.5060.50	+ electromagnet>Volt: 12
> 1000s.: (54.5061.50)	2nd speed 1/min: 1400
7th speed 1/min: 1400	Charge press. hPa: 1000
Charge press. hPa: 1000	Inj. qty. cm3/: 0.03.0 Z'
Shutoff	# difference> 1000S.: -
electromagnet>Volt: 12	+ Shutoff
Del. quantity cm3/: 55.5056.50	+ electromagnet Volt: 12
> 1000s.: (52.5059.50)	
8th speed 1/min: 1200	+ TD-travel dif.measurement:
Charge press. hPa: 1000	+ correttore anticipo injezione (SV):
Shutoff	+ 1st speed 1/min: 1400
electromagnet>Volt: 12	+ Charge press. hPa: 1000
Del. quantity cm3/: 53.5058.50	TD-travel : -0.70.9 " difference> mm: -
> 1000s.: (52.0060.00)	+ difference> mm: -
9th speed 1/min: 700	+ Shutoff
Charge press. hPa: 1000	+ electromagnet>Volt: 12
Shutoff	+ 2nd speed 1/min: 1400
electromagnet>Volt: 12	+ Charge press. hPa: 1000
Del. quantity cm3/: 52.5061.50	+ TD-travel : -1.01.4 '
> 1000s.: (51.5062.50)	
10th speed 1/min: 550	Automatic starting fuel delivery:
Charge press. hPa: -	1 material starting race accivery.
Shutoff	+ 1st speed 1/min: 500
electromagnet>Volt: 12	Charge press. hPa: -
Del. quantity cm3/: 24.0025.00	+ Shutoff
> 1000S.: (21.0028.00)	
/ 10005.1 (21.00.1.20.00/	electromagnet>Volt: 12
	+ Del. quantity cm3/: 14.0030.00 + > 1000s.: (14.0030.00)
	7 10005.: (14.0030.00)
Flores showers.	1 2md and 4/min 200
Electr. shutoff:	+ 2nd speed 1/min: 200
4.4	+ Shutoff
1st speed 1/min: 325	+ electromagnet>Volt: 12
Del. quantity cm3/: 0.003.00	+ Del. quantity cm3/: 55.00105.00
> 1000s.: -	+ > 1000s.: (55.00105.00)
Shutoff	†
electromagnet>volt: -	+ 4th speed 1/min: 100
_ **	+ Shutoff
Idle delivery:	+ electromagnet>Volt: 12
	+ Del. quantity cm3/: 40.0090.00
1st speed 1/min: 325	+ > 1000s.: (40.0090.00)
Shutoff	+
electromagnet>Volt: 12	+ Shutoff electromagnet:
Del. quantity cm3/: 8.0012.00	+
> 1000s.: (6.00,14.00)	+ Cut-in
Dispersion cm3/: 6.5	→ min voltage : 10.0
> 1000S.: (6.5)	Rated voltage : 12.0
2nd speed 1/min: 450	+
Shutoff	+ Mounting and assembly dimensions:
electromagnet>Volt: 12	- The state of the
Del. quantity cm3/: 0.003.00	+ Designation
> 1000s.: -	K mm: 3.23.4
- 1000.	T KF mm: KOT
Load-dependent start of delivery:	T MS% mm: 1.61.9
Injqty.dif.measurement:	The state of the s
and additional and a second and it.	
1st speed 1/min; 1/00	
1st speed 1/min: 1400	+ Ya mm: 37.939.9

Yb

mm: 43.7...48.9

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position
Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

Pump with slave plunger

Z = Absolute delivery

Note inst. in remarks column

Test scheet Edition : 11.11.94

replaces

Calibrating oil : ISO-4113

: VE4/12F1300R566 Injection pump Type number : 0 460 424 103

Customer Part-No. :

Customer-specific information

Customer : MUM

Engine : 4.10T

TEST BENCH REQUIREMENTS

Calibrating oil return>temp. > °C

with>thermometer>: 40.00...48.00 Electronically> : 42.00.,.50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 109 assembly>

Opening

bar: 207.00...210.00 Pressure>

Perforated plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery Prestroke mm: -(from BDC): -

Injection pump setting values Test specifications in parentheses

Timing device travel

1/min: 1000 Speed Charge press. hPa: 1600

Setting value mm: 2.70...3.10

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1000 Speed Charge press hPa: 1600

Setting value bar: 5.60...6.20

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

1/min: 800 Charge press. hPa: 1600

Del. quantity cm3/

1000s.: 82.50...83.50

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 4.0 1000s.: (4.5)

Full-load del. w/out charge press.:

Speed 1/min: 500 Del. quantity cm3/

1000s.: 54.50...58.50

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

Speed 1/min: 375 Charge press hPa: -

Del. quantity cm3/ > 1000s.: 13.50...17.50

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.5 > 1000s.: (5.0)

Full-load speed regulation

1/min: 1400 Charge press hPa: 1600

Del. quantity cm3/ > 1000S.: 77.00...83.00

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100 Speed Charge press hPa: -

Del. quantity cm3/: 70.00...110.00

mind> 1000s.: 70.00

Shutoff

electromagnet>Volt: 12

Inspection pump test specifications Test specifications in parentheses

Timing-device charac	cteristic: +	Charge-air pressure	-setting
1-+ 1/	900	point> hPa:	
1st speed 1/min:		LDA-stroke mm:	
Charge press hPa:		Shutoff	40
	0.501.30	electromagnet>Volt:	
	(0.201.60)	Del. quantity cm3/:	69.5073.50
electromagnet>Volt:	12 +	> 1000s.:	(67.0076.00)
2nd speed 1/min:	1000	2nd speed 1/min:	1800
Charme proce hDa.	1600	Charge press. hPa:	
TD travel mm:	2.703.10	Shutoff	1000
> mn:	(2.203.60)	electromagnet Volt:	12
Shutoff	T		
	12 T	Del. quantity cm3/:	(0.003.00
electromagnet>Volt:	16		(0.003.00)
3rd speed 1/min:		3rd speed 1/min:	
Charge press hPa:	1600 +	Charge press. hPa:	1600
	3.904.70	Shutoff	
> mm:	(3.605.00)	electromagnet>Volt:	12
Shutoff	+	Del. quantity cm3/:	28.0042.00
electromagnet>Volt:	12	> 1000s.:	(25.0045.00)
eteoti enagricio rocci	1	4th speed 1/min:	
Complement management	T T		
Supply-pump pressure	characteristic:	Charge press. hPa:	1000
	<u></u>	Shutoff	40
1st speed 1/min:		electromagnet>Volt:	12
Charge press. hPa:	1600 +	Del. quantity cm3/:	77.0083.00
Supply-pump	+	> 1000s.:	(74.0086.00)
pressure> bar:	4.805.40	5th speed 1/min:	
Shutoff		Charge press. hPa:	
electromagnet>Volt:	12	Shutoff	1000
			12
		electromagnet>Volt:	99 50 00 50
Charge press. hPa:	1000	Del. quantity cm3/:	68.5092.50
Supply-pump	- †		(87.0094.00)
pressure> bar:	5.606.20	6th speed 1/min:	1000
Shutoff	+	Charge press. hPa:	1600
electromagnet>Volt:	12 +	Shutoff	
3rd speed 1/min:		electromagnet>Volt:	12
Charge press. hPa:		Del. quantity cm3/:	82 UU 88 UU
Supply-pump	1000	> 1000s.:	(80.0090.00)
	6.707.30 I		
	6.707.30	7th speed 1/min:	
Shutoff	. †	Charge press. hPa:	1600
electromagnet>Volt:	12 +	Shutoff	
	+	electromagnet>Volt:	12
Overlow quantity at	overflow valve:	Del. quantity cm3/:	82.5083.50
` _ *	+	> 1000s.:	(80.0086.00)
1st speed 1/min:	550 1	8th speed 1/min:	
Charge press. hPa:		Charge press. hPa:	
Shutoff	T	Shutoff	
	12 T		13
electromagnet>Volt:		electromagnet>Volt:	12
	97.20138.80	Del. quantity cm3/:	
quantity> cm3/10s:		> 1000s.:	(52.0061.00)
2nd speed 1/min:			
Charge press. hPa:	1600		
Shutoff	1		
electromagnet>Volt:	12 📗	Electr. shutoff:	
Overflow:	111.10194.4		
quantity> cm3/10s:	(96 10 200 (0)	1st speed 1/min:	775
qualitity/ UID/ IUS:	(70.10207.40)		
Data and make a second		Charge press. hPa:	
Delivery-quant. and I	preakaway char.: +	Del. quantity cm3/:	
	+		(0.003.00)
	+	Shutoff	
1nd speed 1/min:	700 1	electromagnet>volt:	-

Idle delivery:

1st speed 1/min: 375

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 13.50...17.50 1000s.: (11.50...19.50) cm3/: 3.5

Dispersion 1000s.: (5.0) 1/min: 300 2nd speed

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 33.0...41.0 > 1000s.: (31.0...43.0)

3rd speed 1/min: 450

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 0.00...6.00 1000s.: (0.00...6.00)

Automatic starting fuel delivery:

1/min: 250 1st speed Charge press. hPa: -

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 25.00...65.00 > 1000s.: (25.00...65.00)

Shutoff electromagnet:

Cut-in

>min voltage : 10.0 Rated voltage : 12.0

Mounting and assembly dimensions:

Designation

mm: 3.6...3.8 K KF mm: KOT MS1 mm: 1.0...1.3 SVS max. mm: -

LDA stroke mm: -

mm: 48.5...50.5 Ya mm: 32.8...41.2 Yb

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control Lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position

Measurement point = edge of control lever on distributor-head end

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column : CDC Test scheet Edition : 31.01.95 replaces Calibrating oil : ISO-4113 : VE6/12F1100R610 Injection pump Type number : 0 460 426 240 Customer Part-No. : Customer-specific information Customer : 6 BTA- 590 I Engine TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar: 0.30...0.40 Calibrating nozzle-holder : 1 688 901 027 assembly> Opening Pressure> bar: 250.00...253.00 Perforated plate diameter> mm: 0,5 Test inj. tubing : 1 680 750 017 Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840 Start of delivery Prestroke mm: 0,3 (from BDC): +-0.02(0.04)Start of delivery block Piston stroke mm: 1,85 mm: +-0.02(0.06)Outlet >

Charge press. hPa: 1000 Setting value mm: 1.00...1.40 Shutoff electromagnet>Volt: 12 Supply-pump pressure Speed 1/min: 900 Charge press hPa: 1000 Setting value bar: 4.10...4.70 Shutoff electromagnet>Volt: 12 Full-load del. with charge press.: 1/min: 750 Charge press. hPa: 1000 Del. quantity cm3/ > 1000s.: 91.50...92.50 Shutoff electromagnet>Volt: 12 Dispersion cm3/: 4.0 1000s.: (4.5) Full-load del. w/out charge press.: Speed 1/min: 500 Del. quantity cm3/ 1000s.: 43.50...44.50 Shutoff electromagnet>Volt: 12 Low-idle speed regulation 1/min: 375 Speed Del. quantity cm3/ 1000s.: 15.00...21.00 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 5.5 > 1000S.: (7.0) Full-load speed regulation Speed 1/min: 1160 Charge press hPa: 1000 Del. quantity cm3/ 1000s.: 61.00...67.00 Shutoff electromagnet>Volt: 12 Start: 1/min: 100 Speed Del. quantity cm3/: 65.00...105.00 mind> 1000s.: 65.00 Shutoff electromagnet>Volt: 12

1/min: 900

Speed

K20

Injection-pump setting values Test specifications in parentheses

Timing-device travel

Delivery-quant. and breakaway char.: Inspection-pump test specifications Test specifications in parentheses 1nd speed 1/min: 700* Timing-device characteristic: Charge-air pressure-setting hPa: 550 1/min: 1100 hPa: 1000 2nd speed Shutoff electromagnet>Volt: 12
Del. quantity cm3/: 76.50...77.50
> 1000S.: (73.00...81.00)
2nd speed 1/min: 1270
Charge press. hPa: 1000
Shutoff Charge press mm: 1.70...2.50 TD travel mm: (1.40...2.80) Shutoff electromagnet>Volt: 12 3rd speed 1/min: 900 Charge press hPa: 1000 electromagnet Volt: 12 mm: 1.00...1.40 Del. quantity cm3/: 0.00...3.00 TD travel 1000s.: (0.00...3.00) mm: (0.50...1.90) ard speed 1/min: 1180 Charge press. hPa: 1000 Shutoff Shutoff electromagnet>Volt: 12 4th speed 1/min: 750 Charge press hPa: 1000 electromagnet>Volt: 12 Del. quantity cm3/: 15.00...55.00 > 1000s.: (15.00...55.00) TD travel mm: 0.10...0.90 mm: (0.00...1.20) 1/min: 1160 Shutoff 5th speed electromagnet>Volt: 12 Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 61.00...67.00 > 1000s.: (58.00...70.00) Supply-pump pressure characteristic: 1st speed 1/min: 500 Charge press. hPa: 1000 Supply-pump 1/min: 1100 9th speed Charge press. hPa: 1000 pressure> bar: 2.40...3.00 Shutoff electromagnet>Volt: 12
Del. quantity cm3/: 77.50...80.50
> 1000S.: (76.00...82.00)
10th speed 1/min: 900 Shutoff electromagnet>Volt: 12 2nd speed 1/min: 900 Charge press. hPa: 1000 Charge press. hPa: 1000 Shutoff Supply-pump pressure> bar: 4.10...4.70 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 82.00...86.00 > 1000S.: (80.50...87.50)
12th speed 1/min: 750
Charge press. hPa: 1000
Shutoff electromagnet>Volt: 12 1/min: 1100 3rd speed Charge press. hPa: 1000 Supply-pump pressure> bar: 5.00...5.60 electromagnet>Volt: 12
Del. quantity cm3/: 91.50...92.50
> 1000S.: (89.00...95.00) Shutoff electromagnet>Volt: 12 1/min: 500 Overlow quantity at everflow valve: 18th speed Charge press. hPa: -Shutoff 1st speed Shutoff 1/min: 500 electromagnet>Volt: 12 Del. quantity cm3/: 43.50...44.50 electromagnet>Volt: 12 Overflow : 41.00...83.00 1000s.: (40.00...48.00) quantity> cm3/10s: (26.00...98.00) 1/min: 1100 2nd speed Charge press. hPa: 1000 Shutoff Mech. shutoff: electromagnet>Volt: 12 : 55.00...139.00 Overflow quantity> cm3/10s: (40.00...154.00)

Electr. shutoff:

1st speed 1/min: 375
Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00)

Shutoff

electromagnet>volt: -

Idle delivery:

1st speed 1/min: 375

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 15.00...21.00

1000s.: (13.00...23.00)

cm3/: 5.5 1000s.: (7.0) 1/min: 500 Dispersion 2nd speed

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 0.00...4.00 1000s.: (0.00...4.00)

Automatic starting fuel delivery:

1/min: 250 1st speed

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 65.00...115.00

1000s.: (65.00...115.00)

1/min: 350 2nd speed

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 30.00...70.00

1000s.: (30.00...70.00)

4th speed 1/min: 100

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 65.00...105.00

1000s.: (65.00...105.00)

Shutoff electromagnet:

Cut-in

>min voltage : 10,0 Rated voltage : 12,0

Mounting and assembly dimensions:

Designation

K mm: --

KF mm: 5.0...5.4

MS1 mm: 1.34-1.59

mm: 34.8...38.8 Ya

Yb mm: 45.8...51.2

Remarks:

: C.D.C # 391 6942

Operate control Lever after each manifold-pressure compensator pressure change.

* Correction at adjusting nut

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control Lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

Permissible port/port scatter with stop test, mechanical = max. 5.0 ccm/1000 S.

Note inst. in remarks column

Test scheet Edition : 31.01.95

replaces

Calibrating oil : ISO-4113

Injection pump : VE6/12F1250R556-1 Type number : 0 460 426 241

Customer Part-No. :

Customer-specific information : PERKINS Customer

: Q20 PHASER 195TI Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating oil return>temp. > °C

with>thermometer>: 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 027 assembly>

Opening |

bar: 250.00...253.00 Pressure>

Perforated plate

diameter> mm: 0,5

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450 x Length>

Start of delivery block mm: 1,25 Piston stroke

mm: +0.02(0.06)

Outlet >

Injection-pump setting values Test specifications in parentheses

Timing device travel

Speed 1/min: 900 Charge press. hPa: 1500

Setting value mm: 1.70...1.90 Shutoff

electromagnet>Volt: 24

Supply-pump pressure

1/min: 900 Speed

Charge press hPa: 1500 Setting value bar: 7.20...7.80

Shutoff

electromagnet>Volt: 24

Full-load del. with charge press.:

1/min: 900 Charge press. hPa: 1500

Del. quantity cm3/ > 1000s.: 91.00...92.00

Shutoff

electromagnet>Volt: 24 Dispersion cm3/: 5.0 1000s.: (5.0)

Full-load del. w/out charge press.:

1/min: 500

Del. quantity cm3/

1000s.: 60.00...61.00

Shutoff

electromagnet>Volt: 24

Low-idle speed regulation

1/min: 280 Speed

Del. quantity cm3/

1000s.: 11.00...15.00

Shutoff

electromagnet>Volt: 24 Del. quantity cm3/: 6.5 1000s.: (6.5)

Full-load speed regulation

Speed 1/min: 1400 Charge press hPa: 1500

Del. quantity cm3/

1000s.: 42.00...48.00

Shutoff

electromagnet>Volt: 24

Start:

Speed 1/min: 100 Del. quantity cm3/: 130.00...190.00

1000s.: 130.0 mind>

Shutoff

electromagnet>Volt: 24

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:	quantity> cm3/10s: (40.00154.00)
1st speed 1/min: 1250 Charge press hPa: 1500 TD travel mm: 2.903.70	Delivery-quant. and breakaway char.:
> mm: (2.903.70)	1nd speed 1/min: 700*
electromagnet>Volt: 24	Charge-air pressure-setting
2nd speed 1/min: 1000	point> hPa: 700
Charge press hPa: 1500	Shutoff
TD travel mm: 2.403.00 +	electromagnet>Volt: 24
> mm: (2.003.40) + Shutoff	Del. quantity cm3/: 83.5084.50
Shutoff	> 1000s.: (80.5087.50)
electromagnet>Volt: 24	2nd speed 1/min: 1480
3rd speed 1/min: 900	Charge press. hPa: 1500
Charge press hPa: 1500	Shutoff
TD travel mm: 1.701.90 + mm: (1.202.40)	electromagnet Volt: 24
> mm: (1.202.40) +	Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00)
electromagnet>Volt: 24	3rd speed 1/min: 1350
4th speed 1/min: 800	Charge press. hPa: 1500
Charge press hPa: 1500	Shutoff
TD travel mm: 0.501.10	electromagnet>Volt: 24
> mm: (0.101.50) +	Del. quantity cm3/: 65.0095.00
Shutoff	> 1000\$.: (65.0095.00)
electromagnet>Volt: 24	5th speed 1/min: 1400
+	Charge press. hPa: 1500
Supply-pump pressure characteristic:	Shutoff
†	electromagnet>Volt: 24
1st speed 1/min: 700 +	Del. quantity cm3/: 42.0048.00
Charge press. hPa: 1500	> 1000s.: (39.0051.00)
Supply-pump pressure> bar: 6.106.70	9th speed 1/min: 1250 Charge press. hPa: 1500
Shutoff	Shutoff
electromagnet>Volt: 24	electromagnet>Volt: 24
2nd speed 1/min: 900	Del. quantity cm3/: 90.5095.50
Charge press. hPa: 1500	> 1000s.: (89.5096.50)
Supply-pump +	10th speed 1/min: 700
pressure> bar: 7.207.80 +	Charge press. hPa: 1500
Shutoff	Shutoff
electromagnet>Volt: 24	electromagnet>Volt: 24
3rd speed 1/min: 1250 + Charge press. hPa: 1500 +	Del. quantity cm3/: 89.0095.00 > 1000s.: (88.0096.00)
Supply-pump	12th speed 1/min: 900
pressure> bar: 8.208.80	Charge press. hPa: 1500
Shutoff	Shutoff
electromagnet>Volt: 24	electromagnet>Volt: 24
+	Del. quantity cm3/: 91.0092.00
Overlow quantity at overflow valve:	> 1000s.: (88.0095.00)
†	18th speed 1/min: 500
1st speed 1/min: 500	Charge press. hPa: -
Charge press. hPa: -	Shutoff
Shutoff	electromagnet>Volt: 24
electromagnet>Volt: 24 Overflow: : 41.0086.00	Del. quantity cm3/: 60.0061.00 > 1000s.: (57.0064.00)
quantity> cm3/10s: (26.0098.00)	/ 10003 (27.0004.00)
2nd speed 1/min: 1100	
Charge press. hPa: 1500	Mech. shutoff:
Shutoff	The contract of the contract o
electromagnet>Volt: 24	1st speed
Overflow : 55.00139.00	Charge press. hPa: 1500

Del. quantity cm3/: 0.0...3.0 1000s.: (0.0...3.0) Shutoff electromagnet>volt: 24 Electr. shutoff: 1/min: 280 1st speed Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Shutoff electromagnet>volt: -Idle delivery: 1/min: 280 1st speed Shutoff electromagnet>Volt: 24
Del. quantity cm3/: 11.00...15.00 1000s.: (7.00...19.00) Dispersion cm3/: 6.5 1000s.: (6.5) 2nd speed 1/min: 400 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.00...3.00 > 1000s.: (0.00...3.00) Automatic starting fuel delivery: 1st speed 1/min: 130 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 130.00...190.00 > 1000s.: (130.00...190.00) 1/min: 230 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 40.00...80.00 > 1000s.: (40.00...80.00) 1/min: 100 4th speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 130.00...190.00 1000s.: (130.00...190.00) Shutoff electromagnet: Cut-in >min voltage : 20,0

: 24,0

mm: 3.6...3.8

mm: 1.21-1.46

mm: KOT

Mounting and assembly dimensions:

Ya mm: 37.2...39.2 Yb mm: 44.9...53.5

Remarks:

Operate control lever after each manifold-pressure compensator pressure change.

* Correction at adjusting nut

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

KF

Rated voltage

Designation

AFB/AFB BOSCH-INJ.-PUMP TEST SPECIFICATIONS valve Volt: 24 > Shutoff Note inst. in remarks column electromagnet>Volt: 24 Test scheet Supply-pump pressure Edition : 01.02.95 replaces Speed 1/min: 1000 Charge press hPa: 1000 Setting value bar: 7.20...7.80 Calibrating oil : ISO-4113 Injection pump : VE6/12F1350R623 KSB/AFB Type number : 0 460 426 242 valve > Volt: 24 Customer Part-No. : Shutoff electromagnet>Volt: 24 Customer-specific information Full-load del. with charge press.: Customer : IVECO-FIAT 1/min: 700 Speed : 8060,45B,5100 Charge press. hPa: 1000 (DI) Engine Del. quantity cm3/ > 1000s.: 74.50...81.50 TEST BENCH REQUIREMENTS KSB/AFB Overflow restricti: 1 463 456 303 Volt: 24 valve > Shutoff Calibrating-oil electromagnet>Volt: 24 return>temp. > °C Dispersion cm3/: 3.5 with>thermometer> : 54.00...56.00 1000s.: (5.0) Electronically> Full-load del. w/out charge press.: Inlet press., bar: 0.30...0.40 1/min: 500 Speed Calibrating nozzle-holder Del. quantity cm3/ : 1 688 901 027 1000s.: 55.00...62.00 assembly> 11 KSB/AFB Opening > Volt: 24 valve bar: 250.00...253.00 Pressure> Shutoff electromagnet>Volt: 24 Perforated-plate diameter> mm: 0,5 Low-idle speed regulation 1/min: 350 Speed Test inj. tubing : 1 680 750 073 Del. quantity cm3/ 1000s.: 11.00...21.00 Outside diameter : 6.00 x Wall>thickness : 2.00 KSB/AFB > Volt: 24 valve mm: 450 x Length> Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 5.0 Start of delivery block 1000s.: (5.0) Piston stroke mm: 1,00 mm: +-0.02(0.06)Outlet > Full-load speed regulation Injection-pump setting values 1/min: 1500 Speed Test specifications in parentheses Charge press hPa: 1000 Del. quantity cm3/ 1000s.: 37.00...43.00 Timing-device travel KSB/AFB Speed 1/min: 1000 valve > Volt: 24 Charge press. hPa: 1000 Shutoff Setting value mm: 1.90...2.10 electromagnet>Volt: 24

	+ Charge press. hPa: 1000
Start:	+ Supply-pump + pressure> bar: 4.805.40
Speed 1/min: 100	+ pressure> bar: 4.805.40 + KSB/AFB
Del. quantity cm3/: 60.00110.00	+ valve > Volt: 24
mind> 1000s.: 60.00	+ Shutoff
KSB/AFB	+ electromagnet>Volt: 24
Valve > Volt: 24	+ 2nd speed 1/min: 1000
Shutoff	+ Charge press. hPa: 1000
electromagnet>Volt: 24	+ Supply-pump + pressure> bar: 7.207.80
Inspection-pump test specifications	+ pressure> bar: 7.207.80 + KSB/AFB
Test specifications in parentheses	Valve > Volt: 24
Tobe open troatrons in participates	+ Shutoff
Timing-device characteristic:	+ electromagnet>Volt: 24
	+ 3rd speed 1/min: 1350
2nd speed 1/min: 1100	+ Charge press. hPa: 1000
Charge press hPa: 1000	+ Supply-pump
TD travel mm: 2.803.40	+ pressure> bar: 9.109.70
> mm: (2.403.80)	+ KSB/AFB
KSB/AFB	- Valve > Volt: 24 - Shutoff - electromagnet>Volt: 24 - 4th speed 1/min: 450 - Charge press. hPa: 1000 - Supply-pump
valve > Volt: 24	+ Shutoff
Shutoff	+ electromagnet>Volt: 24
electromagnet>Volt: 24	+ 4th speed 1/min: 450
3rd speed 1/min: 1000	+ Charge press. hPa: 1000
Charge press hPa: 1000	
TD travel mm: 1.902.10 mm: (1.302.70)	+ pressure> bar: 7.008.60 B
	+ KSB/AFB
KSB/AFB valve > Volt: 24	+ valve > Volt: - + Shutoff
valve > Volt: 24 Shutoff	
electromagnet>Volt: 24	electromagnet>Volt: 24
4th speed 1/min: 900	Overlow quantity at overflow valve:
Charge press hPa: 1000	T Over tow quantity at over itow valve.
TD travel mm: 0.501.10	Ist speed 1/min: 600
> mm: (0.101.50)	Charge press. hPa: 1000
KSB/AFB	+ KSB/AFB
valve > Volt: 24	+ valve > Volt: 24
Shutoff	+ Shutoff
electromagnet>Volt: 24	+ electromagnet>Volt: 24
5th speed 1/min: 450	+ Overflow : 41.0086.00
Charge press. hPa: 1000	+ quantity> cm3/10s: (26.0098.00)
TD travel mm: 3.504.70 B	+ 2nd speed 1/min: 1350
> mm: (3.403.80) B	+ Charge press. hPa: 1000
KSB/AFB	+ KSB/ĀFB
valve > Volt: -	+ valve > Volt: 24
Shutoff	+ Shutoff
electromagnet>Volt: 24	+ electromagnet>Volt: 24
6th speed 1/min: 320	+ Overflow : 55.00139.00
Charge press. hPa: 1000	+ quantity> cm3/10s: (40.00154.00)
TD travel mm: 1.802.20 A	†
> mm: (0.803.20) A	† Delivery-quant. and breakaway char.:
KSB/AFB	†
valve > Volt: -	1 and annual 1/min. 6004
Shutoff	1 1nd speed 1/min: 600*
electromagnet>Volt: 24	+ Charge-air pressure-setting + point> hPa: 300
Simplement processes characteristics	+ point> hPa: 300 + KSB/AFB
Supply-pump pressure characteristic:	+ Valve > Volt: 24
1st speed 1/min: 600	+ Shutoff
rat specu triitti. Duu	T Silutori

electromagnet>Volt: 24	
	Charge press. hPa: -
Del. quantity cm3/: 76.5077.50	KSB/AFB
> 1000s.: (73.0081.00) +	valve > Volt: 24
2nd speed 1/min: 1600	Shutoff
Charge press. hPa: 1000 +	electromagnet>Volt: 24
KSB/AFB +	Del. quantity cm3/: 58.0059.00
	40000 (FF 00 (2 00)
valve > Volt: 24	> 1000\$.: (55.0062.00)
Shutoff	
electromagnet Volt: 24	
Del. quantity cm3/: 0.003.00	Mech. shutoff:
	TROUT SHEEDITT
> 1000s.: (0.003.00)	
3rd speed 1/min: 1450 +	1st speed 1/min: 1350
Charge press. hPa: 1000	Charge press. hPa: 1000
KSB/AFB +	Del. quantity cm3/: 0.03.0
valve > Volt: 24	> 1000s.: (0.03.0)
Shutoff +	Shutoff
electromagnet>Volt: 24	
etectrollagretzvott. 24	electromagnet>volt: 24
Del. quantity cm3/: 50.0066.00	
> 1000s.: (48.0068.00) +	Electr. shutoff:
	Etecti. Silutori.
5th speed 1/min: 1500	
Charge press. hPa: 1000	1st speed 1/min: 350
KSB/AFB +	Del. quantity cm3/: 0.003.00
valve > Volt: 24	> 1000s.: (0.003.00)
Shutoff +	Shutoff
electromagnet>Volt: 24	electromagnet>volt: -
etectrollagites voct. 24	etectionagnet/vott.
Del. quantity cm3/: 37.0043.00	
> 1000s.: (34.0046.00) +	Idle delivery:
	tute detivery.
6th speed 1/min: 1000 +	
Charge press. hPa: 1000	1st speed 1/min: 350
KSB/AFB +	ЖSB/AFB
valve > Volt: 24	valve > Volt: 24
	·
Shutoff	Shutoff
electromagnet>Volt: 24	electromagnet>Volt: 24
27/ 20 50	etectionagnetzvott. 24
Del. quantity cm3/: 72.5076.50	Del. quantity cm3/: 14.0018.00
Del. quantity cm3/: 72.5076.50	Del. quantity cm3/: 14.0018.00
Del. quantity cm3/: 72.5076.50 + 1000s.: (71.0078.00)	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00)
Del. quantity cm3/: 72.5076.50 + 1000s.: (71.0078.00) + 7th speed 1/min: 600	Del. quantity cm3/: 14.0018.00 > 1000\$.: (11.0021.00) Dispersion cm3/: 5.0
Del. quantity cm3/: 72.5076.50 + 1000s.: (71.0078.00) + 7th speed 1/min: 600	Del. quantity cm3/: 14.0018.00 > 1000\$.: (11.0021.00) Dispersion cm3/: 5.0
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0)
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50	<pre>Del. quantity cm3/: 14.0018.00 ></pre>
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24	<pre>Del. quantity cm3/: 14.0018.00 ></pre>
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00)	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350	<pre>Del. quantity cm3/: 14.0018.00 ></pre>
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000	Del. quantity cm3/: 14.0018.00 > 1000S.: (11.0021.00) Dispersion cm3/: 5.0 > 1000S.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00)
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000	Del. quantity cm3/: 14.0018.00 > 1000S.: (11.0021.00) Dispersion cm3/: 5.0 > 1000S.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00)
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24	Del. quantity cm3/: 14.0018.00 > 1000S.: (11.0021.00) Dispersion cm3/: 5.0 > 1000S.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Automatic starting fuel delivery:
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff	Del. quantity cm3/: 14.0018.00 > 1000S.: (11.0021.00) Dispersion cm3/: 5.0 > 1000S.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0073.00	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB valve > Volt: 24
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0073.00 > 1000s.: (68.0075.00)	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB valve > Volt: 24 Shutoff
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0073.00 > 1000s.: (68.0075.00)	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB valve > Volt: 24 Shutoff
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0073.00 > 1000s.: (68.0075.00) 9th speed 1/min: 700	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0073.00 > 1000s.: (68.0075.00) 9th speed 1/min: 700 Charge press. hPa: 1000	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 60.00110.00
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0073.00 > 1000s.: (68.0075.00) 9th speed 1/min: 700 Charge press. hPa: 1000	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 60.00110.00
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0084.00) Sth speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Del. quantity cm3/: 70.0073.00 > 1000s.: (68.0075.00) 9th speed 1/min: 700 Charge press. hPa: 1000 KSB/AFB	Del. quantity cm3/: 14.0018.00 > 1000s.: (11.0021.00) Dispersion cm3/: 5.0 > 1000s.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000s.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0073.00 > 1000s.: (68.0075.00) 9th speed 1/min: 700 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24	Del. quantity cm3/: 14.0018.00 > 1000S.: (11.0021.00) Dispersion cm3/: 5.0 > 1000S.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 60.00110.00 > 1000S.: (60.00110.00)
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0084.00) Sth speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Del. quantity cm3/: 70.0073.00 > 1000s.: (68.0075.00) 9th speed 1/min: 700 Charge press. hPa: 1000 KSB/AFB	Del. quantity cm3/: 14.0018.00 > 1000S.: (11.0021.00) Dispersion cm3/: 5.0 > 1000S.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 60.00110.00 > 1000S.: (60.00110.00)
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0073.00 > 1000s.: (68.0075.00) 9th speed 1/min: 700 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff	Del. quantity cm3/: 14.0018.00 > 1000S.: (11.0021.00) Dispersion cm3/: 5.0 > 1000S.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 60.90110.00 > 1000S.: (60.00110.00) 2nd speed 1/min: 250
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0073.00 > 1000s.: (68.0075.00) 9th speed 1/min: 700 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24	Del. quantity cm3/: 14.0018.00 > 1000S.: (11.0021.00) Dispersion cm3/: 5.0 > 1000S.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 60.00110.00 > 1000S.: (60.00110.00) 2nd speed 1/min: 250 KSB/AFB
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0073.00 > 1000s.: (68.0075.00) 9th speed 1/min: 700 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24	Del. quantity cm3/: 14.0018.00 > 1000S.: (11.0021.00) Dispersion cm3/: 5.0 > 1000S.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 60.90110.00 > 1000S.: (60.00110.00) 2nd speed 1/min: 250
Del. quantity cm3/: 72.5076.50 > 1000S.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000S.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0073.00 > 1000S.: (68.0075.00) 9th speed 1/min: 700 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 77.5078.50	Del. quantity cm3/: 14.0018.00 > 1000S.: (11.0021.00) Dispersion cm3/: 5.0 > 1000S.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 60.00110.00 > 1000S.: (60.00110.00) 2nd speed 1/min: 250 KSB/AFB valve > Volt: 24
Del. quantity cm3/: 72.5076.50 > 1000s.: (71.0078.00) 7th speed 1/min: 600 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Del. quantity cm3/: 78.5082.50 > 1000s.: (77.0084.00) 8th speed 1/min: 1350 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0073.00 > 1000s.: (68.0075.00) 9th speed 1/min: 700 Charge press. hPa: 1000 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24	Del. quantity cm3/: 14.0018.00 > 1000S.: (11.0021.00) Dispersion cm3/: 5.0 > 1000S.: (5.0) 2nd speed 1/min: 425 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.003.00 > 1000S.: (0.003.00) Automatic starting fuel delivery: 1st speed 1/min: 130 KSB/AFB valve > Volt: 24 Shutoff electromagnet>Volt: 24 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 60.00110.00 > 1000S.: (60.00110.00) 2nd speed 1/min: 250 KSB/AFB

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Del. quantity cm3/: 33.00...67.00 > 1000S.: (33.00...67.00)

4th speed 1/min: 100

KSB/AFB

valve > Volt: 24

Shutoff

electromagnet>Volt: 24

Del. quantity cm3/: 60.00...110.00 > 1000s.: (60.00...110.00)

Shutoff electromagnet:

Cut-in

>min voltage : 20,0 Rated voltage : 24,0

Mounting and assembly dimensions:

Designation

K mm: 3.5...3.7 KF mm: KOT

MS1 mm: 1.46-1.71 Ya mm: 37.9...39.9 Yb mm: 43.1...48.3

Remarks:

Operate control lever after each manifold-pressure compensator pressure change.

* Correction at adjusting nut

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

A = KSB adjustment point B = KSB curve point

Note inst. in remarks column

Test scheet : CDC

Edition : 01.02.95

replaces

Calibrating oil : ISO-4113

Injection pump : VE6/12F1100R620 : 0 460 426 243 Type number

Customer Part-No. :

Customer-specific information

Customer : CDC

: 6T 590 Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 027

Opening |

Pressure> bar: 250.00...253.00

Perforated-plate

diameter> mm: 0,5

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 840

x Length>

Start of delivery

mm: 0,3 Prestroke

(from BDC): +-0.02(0.04)

Start of delivery block Piston stroke mm: 1,50

mm: +-0.02(0.06)

Outlet >

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 750 Speed

Setting value mm: 3.80...4.60

Shutoff

electromagnet>Volt: 24

Supply-pump pressure

1/min: 750 Speed

Setting value bar: 5.40...6.00

Shutoff

electromagnet>Volt: 24

Full-load del. w/out charge press.:

1/min: 900 Speed

Del. quantity cm3/

1000s.: 62.00...63.00

Shutoff

electromagnet>Volt: 24

Low-idle speed regulation

Speed 1/min: 450

Del. quantity cm3/

1000s.: 5.00...11.00

Shutoff

electromagnet>Volt: 24 Del. quantity cm3/: 5.5 1000s.: (7.0)

Full-load speed regulation

Speed 1/min: 1140

Del. quantity cm3/

1000s.: 50.00...56.00

Shutoff

electromagnet>Volt: 24

Start:

Speed 1/min: 100

Del. quantity cm3/: 55.00...115.00

mind> 1000s.: 55.00

Shutoff

electromagnet>Volt: 24

Inspection pump test specifications Test specifications in parentheses

Timing-device characteristic:

1/min: 1000 2nd speed

mm: 3.80...4.60 mm: (3.50...4.90) TD travel

Shutoff

electromagnet>Volt: 24 1/min: 750 3rd speed

mm: 2.40...2.80 TD travel mm: (1.90...3.30)

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Shutoff electromagnet>Volt: 24	electromagnet>Volt: 24 Del. quantity cm3/: 62.0062.00
+	> 1000s.: (59.5065.50)
Supply-pump pressure characteristic:	6th speed 1/min: 750 Shutoff
1st speed 1/min: 400	electromagnet>Volt: 24
Supply-pump	Del. quantity cm3/: 57.0061.00
pressure> bar: 3.904.50 +	> 1000S.: (55.0063.00) 7th speed 1/min: 700
electromagnet>Volt: 24	Shutoff
2nd speed 1/min: 750	electromagnet>Volt: 24
Supply-pump +	Del. quantity cm3/: 55.0059.00
pressure> bar: 5.406.00	> 1000s.: (53.0061.00)
Shutoff electromagnet>Volt: 24	8th speed 1/min: 400 Shutoff
3rd speed 1/min: 1000	electromagnet>Volt: 24
Supply-pump +	Del. quantity cm3/: 16.5024.50
pressure> bar: 6.407.00 +	> 1000s.: (14.5026.50)
Shutoff	
electromagnet>Volt: 24	
Overlow quantity at overflow valve:	Electr. shutoff:
1st speed 1/min: 400	1st speed 1/min: 500
Shutoff	Del. quantity cm3/: 0.003.00
electromagnet>Volt: 24	> 1000s.: (0.003.00)
Overflow : 41.0086.00 + quantity> cm3/10s: (26.0098.00) +	Shutoff electromagnet>volt: -
2nd speed 1/min: 1100	etecti allagiet vott.
Charge press. hPa: 1000	Idle delivery:
Shutoff	4
electromagnet>Volt: 24	1st speed 1/min: 450
Overflow : 55.00139.00 + quantity> cm3/10s: (40.00154.00) +	Shutoff electromagnet>Volt: 24
400.00	Del. quantity cm3/: 5.0011.00
Delivery quant. and breakaway char.:	> 1000s.: (3.0013.00)
+	Dispersion cm3/: 5.5
1nd speed 1/min: 1220	> 1000s.: (7.0) 2nd speed 1/min: 500
1nd speed 1/min: 1220 +	Shutoff
electromagnet>Volt: 24	electromagnet>Volt: 24
Del. quantity cm3/: 0.000.30	Del. quantity cm3/: 0.003.00
> 1000s.: (0.000.30)	> 1000s.: (0.003.00)
2nd speed 1/min: 1175 Shutoff	Automatic starting fuel delivery:
electromagnet Volt: 24 Del. quantity cm3/: 23.0053.00	1st speed 1/min: 240
> 1000s.: (23.0053.00)	Shutoff
3rd speed 1/min: 1140	electromagnet>Volt: 24
Shutoff	Del. quantity cm3/: 5.0035.00
electromagnet>Volt: 24	> 1000s.: (5.0035.00)
Del. quantity cm3/: 50.0056.00 + 1000s.: (47.0059.00) +	2nd speed 1/min: 180
4th speed 1/min: 1100	Shutoff
Shutoff	electromagnet>Volt: 24
electromagnet>Volt: 24	Del. quantity cm3/: 55.00115.00
Del. quantity cm3/: 60.5063.50	> 1000s.: (55.00115.00)
> 1000s.: (59.0065.00) + 5th speed 1/min: 900 +	
Trin cheeper 1/min' 9(1)	4th speed 1/min: 100

electromagnet>Volt: 24

Del. quantity cm3/: 55.00...115.00 > 1000s.: (55.00...115.00)

Shutoff electromagnet:

Cut-in

>min voltage : 20,0 Rated voltage : 24,0

Mounting and assembly dimensions:

KF mm: 5.0...5.4 MS1 mm: 1.43–1.68 Ya mm: 34.8...38.8 Yb mm: 38.9...44.1

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Permissible port/port scatter with stop test, mechanical = max. 5.0 ccm/1000 S.

Note inst. in remarks column

Test scheet : CDC Edition : 02.02.95

replaces : -

Calibrating oil : ISO-4113

Injection pump : VE6/12F125OR498-3 Type number : 0 460 426 244

Customer Part-No. :

Customer-specific information

Customer : CDC

Engine : 6 BT 5.9B

Power KW: 107 Speed 1/min: 2500

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 109

Opening

Pressure> bar: 207.00...210.00

Perforated-plate

diameter> mm: 0,5

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery block Piston stroke mm: 1,20

> mm: +-0,02(0,06)

Outlet > : D

Injection-pump setting values Test specifications in parentheses

Timing-device travel

Speed 1/min: 1000 Charge press. hPa: 1000

Setting value mm: 1.90...2.30

Shutoff

electromagnet>Volt: 24

Supply-pump pressure

Speed 1/min: 1000 Charge press hPa: 1000

Setting value bar: 6.30...6.90

Shutoff

electromagnet>Volt: 24

Full-load del. with charge press.:

Speed 1/min: 850 Charge press. hPa: 1000

Del. quantity cm3/

> 1000s.: 84.50...85.50

Shutoff

electromagnet>Volt: 24 Dispersion cm3/: 5.0 > 1000s.: (5.0)

Full-load del. w/out charge press.:

Speed 1/min: 500

Del. quantity cm3/

> 1000s.: 60.50...61.50

Shutoff

electromagnet>Volt: 24

Low-idle speed regulation

Speed 1/min: 350

Del. quantity cm3/

> 1000s.: 11.00...15.00

Shutoff

electromagnet>Volt: 24 Del. quantity cm3/: 5.5 > 1000s.: (7.0)

Full-load speed regulation

Speed 1/min: 1350 Charge press hPa: 1000

Del. quantity cm3/

> 1000s.: 51.00...57.00

Shutoff

electromagnet>Volt: 24

Start:

Speed 1/min: 100

Del. quantity cm3/: 65.00...95.00

mind> 1000s.: 65.00

Shutoff

electromagnet>Volt: 24

Inspection-pump test specifications Test specifications in parentheses	- Supply-pump - pressure> bar: 7.207.80 - Shutoff
Timing-device characteristic:	- electromagnet>Volt: 24
2nd speed 1/min: 1250 Charge press hPa: 1000	Overlow quantity at overflow valve:
TD travel mm: 2.203.00	- 1st speed 1/min: 500
	- Charge press. hPa: -
KSB/AFB +	- Shutoff
valve > Volt: -	electromagnet>Volt: 24
Shutoff	· Overflow : 41.0086.00
electromagnet>Volt: 24	- quantity> cm3/10s: (26.0098.00)
3rd speed 1/min: 1000 +	- 2nd speed 1/min: 1250
Charge press hPa: 1000	- Charge press. hPa: 1000
TD travel mm: 1.902.30	- Shutoff
> mm: (1.402.80) +	electromagnet>Volt: 24
KSB/AFB	• Overflow : 55.00139.00
valve > Volt: -	 quantity> cm3/10s: (40.00154.00)
Shutoff +	•
electromagnet>Volt: 24	Delivery-quant. and breakaway char.:
4th speed 1/min: 850	•
Charge press hPa: 1000	•
TD travel mm: 0.601.40	· 1nd speed 1/min: 650*
> mm: (0.301.70)	Charge air pressure setting
KSB/AFB	point> hPa: 450
valve > Volt: -	Shutoff
Shutoff	electromagnet>Volt: 24
electromagnet>Volt: 24	Del. quantity cm3/: 71.5072.50
5th speed 1/min: 450	> 1000s.: (68.0076.00)
Charge press. hPa: -	2nd speed 1/min: 1480
TD travel mm: 2.003.00 +	Charge press. hPa: 1000
> mm: (1.803.20)	Shutoff
KSB/AFB	electromagnet Volt: 24
valve > Volt: 24	Del. quantity cm3/: 0.003.00
Shutoff -	> 1000s.: (0.003.00)
electromagnet>Volt: 24	3rd speed 1/min: 1425
· · · · · · · · · · · · · · · · · · ·	Charge press. hPa: 1000
Supply-pump pressure characteristic:	Shutoff
· · · · · · · · · · · · · · · · · · ·	electromagnet>Volt: 24
1st speed	Del. quantity cm3/: 10.0040.00
Charge press. hPa: 1000	> 1000s.: (10.0040.00)
Supply-pump +	5th speed 1/min: 1350
pressure> bar: 3.904.50 +	Charge press. hPa: 1000
Shutoff	Shutoff
electromagnet>Volt: 24	electromagnet>Volt: 24
2nd speed 1/min: 850	Del. quantity cm3/: 51.0057.00
	70000 . (/9 00 40 00)
Charge press. hPa: 1000	> 1000s.: (48.0060.00)
Supply-pump +	9th speed 1/min: 1100
pressure> bar: 5.706.30 +	Charge press. hPa: 1000
Shutoff +	Shutoff
electromagnet>Volt: 24	electromagnet>Volt: 24
3rd speed 1/min: 1000 +	Del. quantity cm3/: 82.5085.50
Charge press. hPa: 1000	> 1000s.: (80.5087.50)
Supply-pump +	10th speed 1/min: 1250
pressure> bar: 6.306.90	Charge press. hPa: 1000
Shutoff	
	Shutoff
electromagnet>Volt: 24	electromagnet>Volt: 24
4th speed 1/min: 1250 +	Del. quantity cm3/: 80.0084.00
Charge press. hPa: 1000 +	> 1000\$.: (79.0085.00)

12th speed 1/min: 850 Charge press. hPa: 1000 Shutoff electromagnet>Volt: 24
Del. quantity cm3/: 84.50...85.50
> 1000s.: (82.00...98.00) 18th speed 1/min: 500 Charge press. hPa: -Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 60.50...61.50 > 1000s.: (57.00...65.00) Mech. shutoff: 1st speed 1/min: 1250 Charge press. hPa: 1000 Del. quantity cm3/: 0.0...3.0 > 1000s.: (0.0...3.0) Shutoff electromagnet>volt: 24 Electr. shutoff: 1st speed 1/min: 350 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) > Shutoff electromagnet>volt: -Idle delivery: 1/min: 350 1st speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 11.00...15.00 1000s.: (6.00...20.00) cm3/: 5.5Dispersion 1000s.: (7.0) 1/min: 410 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Automatic starting fuel delivery: 1st speed 1/min: 200 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 60.00...90.00 1000s.: (60.00...90.00) 1/min: 130 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 75.00...115.00 > 1000S.: (75.00...115.00)

1/min: 100 4th speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 65.00...95.00 > 1000S.: (65.00...95.00) Shutoff electromagnet: Cut-in >min voltage : 20,0 Rated voltage : 24,0 Mounting and assembly dimensions: Designation mm: 3.6...3.8 KF mm: KOT mm: 1.21-1.46 MS1 mm: 34.8...38.8 Ya mm: 43.6...48.8 Yb Remarks:

Operate control lever after each manifold-pressure compensator pressure change.

* Correction at adjusting nut

Ya = Distance between VE flange and speed-control lever in idle position
Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

Permissible port/port scatter with stop test, mechanical = max. 5.0 ccm/1000 S.

Note inst. in remarks column

Test scheet : PEU

Edition : 02.02.95

replaces

Calibrating oil : ISO-4113

Injection pump : VE4/8F2300R425-6 : 0 460 484 070 Type number

Customer Part-No.:

Customer-specific information

Customer : PSA

: XUD9AY / L3 Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 022 assembly>

Opening |

bar: 130.00...133.00 Pressure>

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Start of delivery

Indicator setting

Piston stroke> mm: 0.3 Outlet>

Injection-pump setting values Test specifications in parentheses

Timing device travel

Speed 1/min: 1250 Setting value mm: 3.30...3.70

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1250 Speed

L08

Setting value bar: 5.70...6.30

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

1/min: 1250 Speed

Del. quantity cm3/

1000s.: 29.70...30.70

Shutoff

electromagnet>Volt: 12 cm3/: 2.0 Dispersion 1000s.: (3.0)

Residual-Delivery Setting

Speed 1/min: 500

Del. quantity cm3/

1000s.: 4.50...5.50

Shutoff

electromagnet Volt: 12

Full-load speed regulation

1/min: 2650 Speed

Del. quantity cm3/ > 1000S:: 9.00...13.00

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100

Del. quantity cm3/: 46.00...48.00 mind> 1000s.: 39.50

mind>

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Ini.-aty.dif.measurement:

Speed 1/min: 1250

cm3/Inj.-qty.

difference> 1000S.: -4.0...-10.00 #

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

1.Speed 1/min: 1250

TD-travel

difference> mm: -0.9...-1.1 #

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

2nd speed 1/min: 2000

TD travel mm: 7	·.208.00 +	Shutoff
> mm: (d	6.908.30) +	electromagnet>Volt: 12
Shutoff	+	Del. quantity cm3/: 19.5025.50
electromagnet>Volt: 12	2 +	> 1000s.: (17.5027.50)
3rd speed 1/min 12	250 +	9th speed 1/min: 2200
TD travel mm: 3	.303.70	Shutoff
> mm: (2	2.804.20)	electromagnet>Volt: 12
Shutoff	+	Del. quantity cm3/: 32.0034.00
electromagnet>Volt: 12	2 🗼	> 1000s.: (30.8035.20)
4th speed 1/min: 80	ōo ∔	12th speed 1/min: 1250
TD travel mm: 0.	.401.20	Shutoff
	0.101.50)	electromagnet>Volt: 12
Shutoff	+	Del. quantity cm3/: 29.7030.70
electromagnet>Volt: 12	2 🗼	> 1000S.: (28.0032.40)
3	<u> </u>	13th speed 1/min: 500
Supply-pump pressure of	characteristic:	Shutoff
		electromagnet>Volt: 12
1st speed 1/min: 50	00 ∔	Del. quantity cm3/: 29.8032.80
Supply-pump	1	> 1000s.: (28.3034.30)
pressure> bar: 3.	.303.90	100001111111111111111111111111111111111
Shutoff	1	
electromagnet>Volt: 12	2 🗼	Delivery-quant. and breakaway char.:
2nd speed 1/min: 12	Ž50 ↓	the second secon
Supply-pump	1	<pre>Injqty.values,tempcompensated</pre>
pressure> bar: 5.	.706.30	
Shutoff	1	•
electromagnet>Volt: 12	2 1	12th speed 1/min: 1250
3rd speed 1/min: 22	ām 👃	Shutoff
Supply-pump	1	electromagnet>Volt: 12
pressure> bar: 8.	.208.80	Del. quantity cm3/: 29.7030.70
Shutoff	1	> 1000\$.: (28.0032.40)
electromagnet>Volt: 12	· I	20th speed 1/min: 500
cecti diag et voce. 12	Ī	Shutoff
Overlow quantity at ov	verflow valve:	electromagnet>Volt: 12
over con quarterly at or	Territor vacve.	Del. quantity cm3/: 29.8032.80
1st speed 1/min: 50	m I	> 1000s.: (28.3034.30)
Shutoff	1	1000011 (20.3011134130)
electromagnet>Volt: 12	> 1	
Overflow : 41	ī.0083.00 🕹	
quantity> cm3/10s: (2	26.00 91.00)	Electr. shutoff:
2nd speed 1/min: 22	200	Zecoti i Silatori i
Shutoff		1st speed 1/min: 400
electromagnet>Volt: 12	> ↓	Del. quantity cm3/: 0.003.00
Overflow : 55	5.00139.00	> 1000s.: (0.003.00)
quantity> cm3/10s: (4		Shutoff
	1	electromagnet>volt: -
Delivery-quant. and br	reakaway char :	Ctcott allagi los vocts
beervery damier and br		Damper set qty.:
	1	ramper oce dest.
2nd speed 1/min: 29	enn 👃	LFG-setting:
Shutoff	΄ω	Ero secting.
electromagnet Volt: 12	·	Idle delivery:
Del. quantity cm3/: 0.		Tate delivery.
	0.003.00)	1st speed 1/min: 400
5th speed 1/min: 26		Shutoff
Shutoff		electromagnet Volt: 12
electromagnet>Volt: 12		Del. quantity cm3/: 12.0014.00
Del. quantity cm3/: 9.	.m13.m I	> 10005.: (9.0017.00)
	7.0015.00)	- 1000011 (7100111111007
8th speed 1/min: 25		High Idle:
our speed Trillitti. 23	~~ T	man tare.

	+ electromagnet>Volt: 12
1st speed 1/mi: 475	
Shutoff	Part-load del.at 3rd injqty.
electromagnet>Volt: 12	terza fermo della portata
Del. quantity cm3/: 8.5010.50	stop (EGR set)
> 10008.: (5.5013.50)	scarico) (ARF)
	gaz d'échappement-ARF)
Rest delivery:	Spacing mm: 12.0
nese decivery.	L opacing min. 12.0
1st speed 1/min: 500	1st speed 1/min: 1000
Shutoff	- Shutoff
electromagnet>Volt: 12	electromagnet>Volt: 12
Del. quantity cm3/: 4.505.50	Del. quantity cm3/: 13.5015.50
> 1000s.: (3.007.00)	> 1000s.: (10.5018.50)
/ 10003 (3.007.00)	T / 10005.1 (10.3018.30)
Load-donardont start of dolarsmi	Automotic etenting fuel delivery
Load-dependent start of delivery:	Automatic starting fuel delivery:
Injqty.dif.measurement:	4-4
4.4	1st speed 1/min: 225
1st speed _1/min: 1250	Shutoff
Inj.—qty. cm3/ : -4.010.0 #	electromagnet>Volt: 12
difference> 1000s.: (-4.010.0) #	Del. quantity cm3/: 37.0071.00
Shutoff	> 1000s.: (37.0071.00)
electromagnet>Volt: 12	
2nd speed 1/min: 1250	2nd speed 1/min: 350
Inj.—qty. cm3/: -5.07.0 '	- Shutoff
difference> 1000s.: (-3.09.0) '	- electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 20.0040.00
electromagnet Volt: 12	1000s.: (20.0040.00)
3rd speed 1/min: 1250	
Injqty. cm3/: +2.0+8.0 *	4th speed 1/min: 100
difference> 1000S.: (+2.0+8.0) *	Shutoff
Shutoff	electromagnet>Volt: 12
electromagnet>Volt: 12	Del. quantity cm3/: 46.0048.00
- Cook Gings for total 12	> 1000s.: (39.5054.50)
TD-travel dif.measurement:	1000011 1011111111111111111111111111111
correttore anticipo iniezione (SV):	- Shutoff electromagnet:
1st speed 1/min: 1250	Single recedifications
TD-travel : -0.91.1 #	Cut-in
difference mm: (-0.91.1) #	>min voltage : 10.0
Shutoff -	
electromagnet>Volt: 12	Rated voltage : 12.0
	Mountains and assembly dimensions.
2nd speed 1/min: 1250 -	Mounting and assembly dimensions:
TD-travel : -2.73.7 *	Nacionation .
difference> mm: (-2.63.8) * -	Designation 7.2
Shutoff -	K mm: 3.63.8
electromagnet>Volt: 12 -	KF mm: KOT
- 15 C	- MS mm: 1.31.5
SP press.—dif.measurement:	Ya mm: 27.831.8
pompa di mandata (FP):	- Yb mm: 74.085.0
1st speed 1/min: 1250 -	
Supply pump-	- Remarks:
pressure > : -0.10.3 '	: MIKROSCHALTER: MAß A
difference bar: (-0.10.3)	- : 0,83,0 MM
Shutoff	-
electromagnet>Volt: 12	-
2nd speed 1/min: 1250 -	-
Supply pump-	-
pressure > : -1.21.8 *	-
difference> bar: (-1.11.9) *	-
Shutoff -	-
	•

Note inst. in remarks column

Test scheet : VWW : 02.02.95 Edition

replaces

Calibrating oil : ISO-4113

Injection pump : VE4/8F2200R574 : 0 460 484 071 Type number

Customer Part-No. :

Customer-specific information

Customer

: 1.91 SD EWK Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer>: 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 111 assembly>

Opening

bar: 147.00...150.00 Pressure>

Perforated-plate

diameter> mm: 0.6

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Start of delivery block

Piston stroke mm: 0.9 mm: +-0.02(0.05)

Outlet >

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1250 Speed

Setting value mm: 5.10...5.50

AFB/AFB

valve > Volt: 12

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1250 Setting value bar: 5.40...6.00

KSB/AFB

valve > Volt: 12

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

1/min: 1250 Speed

Del. quantity cm3/

1000s.: 33.00...34.00 > KSB/AFB

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> Volt: 12 valve

Shutoff electromagnet>Volt: 12

cm3/: 2.0 Dispersion 1000s.: (3.0)

Residual-Delivery Setting

1/min: 525 Speed

Del. quantity cm3/

1000s.: 6.00...8.00

KSB/AFB

Volt: 12 valve >

Shutoff

electromagnet Volt: 12

Full-load speed regulation

1/min: 2525 Speed

Del. quantity cm3/

1000s.: 8.50...12.50

KSB/AFB

> Volt: 12 valve

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100

Del. quantity cm3/: 40.00...66.00

mind> 1000s.: 40.00

KSB/AFB

Valve > Volt: 12

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

2nd speed 1/min: TD travel mm:	2000 7.508.30	+ electromagnet>Volt: 12 + Overflow : 41.0083.00
> mm:	(7.208.60)	# quantity> cm3/10s: (26.0098.00)
KSB/AFB	42	+ 2nd speed 1/min: 2200
<pre>valve > Volt: Shutoff</pre>	12	+ KSB/AFB + valve > Volt: 12
electromagnet>Volt:	12	+ Shutoff
3rd speed 1/min:		electromagnet>Volt: 12
	5.105.50	+ Overflow : 55.00139.00
	(4.606.00)	+ quantity> cm3/10s: (40.00154.00)
KSB/AFB	40	
valve > Volt: Shutoff		<pre>+ Delivery-quant. and breakaway char.:</pre>
electromagnet>Volt:		† 2nd speed 1/min: 2675
4th speed 1/min: TD travel mm:	3.103.90	+ 2nd speed 1/min: 2675 + KSB/AFB
	(2.804.20)	+ valve > Volt: 12
KSB/AFB	(2.00.1.4.20)	+ Shutoff
valve > Volt:	12	electromagnet Volt: 12
Shutoff		+ Del. quantity cm3/: 0.003.00
electromagnet>Volt:	12	+ > 1000s.: (0.003.00)
5th speed 1/min:		- 5th speed 1/min: 2525
	0.901.70	KSB/AFB
> mm: KSB/AFB	(1.002.00)	<pre>+ valve > Volt: 12 + Shutoff</pre>
valve > Volt:	12	electromagnet>Volt: 12
Timing valve Volt:		Del. quantity cm3/: 8.5012.50
Shutoff		> 1000s.: (6.5014.50)
electromagnet>Volt:	12	8th speed 1/min: 2400 KSB/AFB
Supply-pump pressure	e characteristic:	valve > Volt: 12 Shutoff
1st speed 1/min:	2000	electromagnet>Volt: 12
Supply-pump		bel. quantity cm3/: 22.0032.00
KSB/AFB	7.307.90	> 1000s.: (21.0033.00) - 9th speed 1/min: 2200
valve > Volt:	12	KSB/AFB
Shutoff	13	valve > Volt: 12
electromagnet>Volt: 2nd speed 1/min:	1250	Shutoff electromagnet>Volt: 12
Supply-pump	120	Del. quantity cm3/: 34.0036.00
pressure> bar:	5.406.00	> 1000s.: (32.8037.20)
KSB/AFB		12th speed 1/min: 1250
valve > Volt:	12	+ KSB/AFB
Shutoff		valve > Volt: 12
electromagnet>Volt:		Shutoff
3rd speed 1/min:	730 -	electromagnet>Volt: 12
Supply-pump pressure> bar:	4.004.60	- Del. quantity cm3/: 33.0034.00 - > 1000s.: (31.3035.70)
KSB/AFB	4.004.00	17th speed 1/min: 1250
valve > Volt:	12 -	KSB solenoid-operated
Shutoff	•	valve > volt: -!
electromagnet>Volt:	12 -	- Shutoff
		electromagnet>volt: 12
Overlow quantity at	overflow valve:	Del. quantity cm3/: 29.7030.70
1st speed 4/min	750	1000H.: (28.0032.40)
1st speed 1/min: KSB/AFB	730 -	- 20th speed 1/min: 750 - KSB/AFB
valve > Volt:	12	T K3B/AFB - Valve > Volt: 12
Shutoff	16.	Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 32.50...35.50 > 1000s.: (31.00...37.00) Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 40.00...74.00 > 1000s.: (40.00...74.00) 1/min: 400 21th speed KSB/AFB > Volt: 12 1/min: 100 valve 4th speed Shutoff KSB/AFB electromagnet>Volt: 12 Del. quantity cm3/: 34.50...40.50 > 1000s.: (32.00...43.00) > Volt: 12 valve Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 40.00...66.00 > 1000s.: (40.00...66.00) Electr. shutoff: Shutoff electromagnet: 1st speed 1/min: 450 Cut-in Del. quantity cm3/: 0.00...3.00
> 1000s.: (0.00...3.00) >min voltage : 10.0 Rated voltage : 12.0 Shutoff electromagnet>volt: -Mounting and assembly dimensions: Designation Damper set qty.: K mm: 3.2...3.4 LFG-setting: **KF** mm: 5.72 mm: 1.1...1.5 MS mm: 36.0...40.0 mm: 47.7...57.3 Idle delivery: Ya 1st speed 1/min: 450 KSB/AFB Remarks: valve > Volt: 12 Shutoff electromagnet Volt: 12 Ya = Distance between VE flange and Del. quantity cm3/: 8.50...10.50 speed-control lever in idle 1000s.: (5.50...13.50) position Measurement point = edge of control lever on drive end High Idle: 1/mi: 525 1st speed KSB/AFB Yb = Distance between VE flange and > Volt: 12 speed-control lever in rated speed valve Shutoff position Measurement point = edge of control lever on distributor—head end electromagnet>Volt: 12 Del. quantity cm3/: 8.50...10.50 > 10000s.: (5.50...13.50) Rest delivery: 1/min: 550 1st speed Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S. KSB/AFB valve Volt: 12 Shutoff electromagnet>Volt: 12 On initial measurement, screw in Del. quantity cm3/: 6.00...8.00 residual-quantity adjusting screw 2 mm. 1000s.: (3.00...11.00) Following pump adjustment, screw out Automatic starting fuel delivery: residual-quantity adjusting screw 2 mm. 1st speed 1/min: 180 KSB/AFB > Volt: 12 valve

L13

Note inst. in remarks column

Test scheet : VWW

Edition : 03.02.95

replaces

Calibrating oil : ISO-4113

: VE4/8F2200R606 Injection pump Type number : 0 460 484 077

Customer Part-No. :

Customer-specific information

Customer

: 1.9L SD Ecomatic Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer>: 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 111 assembly>

Opening

bar: 147.00...150.00 Pressure>

Perforated plate

diameter> mm: 0.6

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 450 x Length>

Start of delivery block mm: 1.00 Piston stroke

mm: +-0.02(0.05)

Outlet > : A

Injection-pump setting values Test specifications in parentheses

Timing device travel

1/min: 1250 Speed

Setting value mm: 5.10...5.50

AFB/AFB

Volt: 12 valve >

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1250 Speed

Setting value bar: 5.40...6.00

KSB/AFB

valve > Volt: 12

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

1/min: 1250

Del. quantity cm3/

1000s.: 33.00...34.00

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KSB/AFB

valve > Volt: 12

Shutoff

electromagnet>Volt: 12 cm3/: 2.0 Dispersion 1000s.: (3.0)

Residual-Delivery Setting

Speed 1/min: 525

Del. quantity cm3/

1000s.: 6.00...8.00

KSB/AFB

Volt: 12 valve >

Shutoff

electromagnet Volt: 12

Full-load speed regulation

1/min: 2525 Speed

Del. quantity cm3/

1000s.: 8.50...12.50 >

KSB/AFB

> Volt: 12 valve

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100

Del. quantity cm3/: 40.00...66.00

mind> 1000s.: 40.00

KSB/AFB

> Volt: 12 Valve

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

2nd speed 1/min: 2000	+ electromagnet>Volt: 12
TD travel mm: 7.508.30	+ Overflow : 41.7086.18
> mm: (7.208.60)	quantity> cm3/10s: (26.7098.18) + 2nd speed 1/min: 2200
valve > Volt: 12	+ KSB/AFB
Shutoff	Valve > Volt: 12
electromagnet>Volt: 12	Shutoff
3rd speed 1/min: 1250	+ electromagnet>Volt: 12
TD travel mm: 5.105.50	+ Overflow : 55.60139.00
> mm: (4.606.00)	
KSB/AFB	+
valve > Volt: 12	Delivery-quant. and breakaway char.:
Shutoff	+
electromagnet>Volt: 12	†
4th speed 1/min: 750	+ 2nd speed 1/min: 2675
TD travel mm: 3.103.90	+ KSB/AFB
> mm: (2.804.20)	
KSB/AFB	+ Shutoff
valve > Volt: 12	+ electromagnet Volt: 12
Shutoff	+ Del. quantity cm3/: 0.003.00
electromagnet>Volt: 12	+ > 1000s.: (0.003.00)
6th speed 1/min: 2000	+ 5th speed 1/min: 2525
TD travel mm: 0.901.70	+ KSB/AFB
> mm: (0.602.00)	
KSB/AFB	+ Shutoff
valve > Volt: 12	+ electromagnet>Volt: 12
Timing valve Volt: 12!	+ Del. quantity cm3/: 8.5012.50
Shutoff	+ > 1000s.: (6.5014.50)
electromagnet>Volt: 12	+ 8th speed 1/min: 2400 + KSB/AFB
Supply-pump pressure characterist	
the system of the second of th	+ Shutoff
1st speed 1/min: 2000	+ electromagnet>Volt: 12
Supply-pump	+ Del. quantity cm3/: 22.0032.00
pressure> bar: 7.307.90	+ > 1000s.: (21.0033.00)
KSB/AFB	+ 9th speed 1/min: 2200
valve > Volt: 12	+ KSB/AFB
Shutoff	+ valve > Volt: 12
electromagnet>Volt: 12	+ Shutoff
2nd speed 1/min: 1250	+ electromagnet>Volt: 12
Supply-pump	+ Del. quantity cm3/: 34.0036.00
pressure> bar: 5.406.00	+ > 1000s.: (32.8037.20)
KSB/AFB	† 12th speed 1/min: 1250
valve > Volt: 12	+ KSB/AFB
Shutoff	+ valve > Volt: 12
electromagnet>Volt: 12	+ Shutoff
3rd speed 1/min: 750	+ electromagnet>Volt: 12
Supply-pump	+ Del. quantity cm3/: 33.0034.00
pressure> bar: 4.004.60	+ > 1000s.: (31.3035.70)
KSB/AFB	† 19th speed 1/min: 1250
valve > Volt: 12	+ KSB/AFB
Shutoff	+ valve > Volt: 12
electromagnet>Volt: 12	+ Timing valve Volt: 12!
A	+ Shutoff
Overlow quantity at overflow valv	/e: + electromagnet>Volt: 12
1st speed 1/min 750	+ Del. quantity cm3/: 29.9030.50
1st speed 1/min: 750	
	+ > 1000s.: -
KSB/AFB	+ 20th speed 1/min: 750

> Volt: 12 Shutoff valve electromagnet>Volt: 12 Shutoff Del. quantity cm3/: 32.50...35.50 electromagnet>Volt: 12 1000s.: (31.00...37.00) Del. quantity cm3/: 40.00...74.00 > 1000s.: (40.00...74.00) 21th speed 1/min: 400 KSB/AFB > Volt: 12 1/min: 100 valve 4th speed Shutoff KSB/AFB electromagnet>Volt: 12 Del. quantity cm3/: 32.50...35.50 > 1000s.: (31.00...37.00) Volt: 12 valve Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 40.00...66.00 > 1000s.: (40.00...66.00) Electr. shutoff: Shutoff electromagnet: 1/min: 450 1st speed Cut-in Del. quantity cm3/: 0.00...3.00 >min voltage 1000s.: (0.00...3.00) Rated voltage : 12.0 Shutoff electromagnet>volt: -Mounting and assembly dimensions: Damper set gty.: Designation mm: 3.2...3.4 mm: 5.72 LFG-setting: KF mm: 1.1...1.5 MS Idle delivery: mm: 36.0...40.0 Ya mm: 45.7...55.3 1st speed 1/min: 450 KSB/AFB Ajustement Potentiometer: > Volt: 12 valve Angle for > Shutoff °: 10.0 electromagnet Volt: 12 Del. quantity cm3/: 8.50...10.50 Supply voltage 1000s.: (5.50...13.50) > volt: 5.0 pot. Output volt High Idle: volt: 0.7 pot. > 1/mi: 525 1st speed Remarks: KSB/AFB valve > Volt: 12 Shutoff On initial measurement, screw in electromagnet>Volt: 12
Del. quantity cm3/: 8.50...10.50 residual-quantity adjusting screw 2 mm. 1000s.: (5.50...13.50) Following pump adjustment, screw out residual-quantity adjusting screw 2 mm. Rest delivery: Ya = Distance between VE flange and 1/min: 525 speed-control lever in idle 1st speed KSB/AFB position Measurement point = edge of control valve > Volt: 12 Shutoff lever on drive end electromagnet>Volt: 12 Del. quantity cm3/: 6.00...8.00 1000s.: (3.00...11.00) Yb = Distance between VE flange and speed-control lever in rated speed Automatic starting fuel delivery: position Measurement point = edge of control 1/min: 180 lever on distributor-head end 1st speed KSB/AFB

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet Edition : 09.02.95 replaces Calibrating oil : ISO-4113 : VE4/8F2300R538-1 Injection pump : 0 460 484 084 Type number Customer Part-No. : Customer-specific information Customer : FIAT-AUTO : M708 NT 17.L Engine TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating-oil return>temp. > °C with>thermometer>: 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar: 0.30...0.40 Calibrating nozzle-holder : 1 688 901 022 assembly> Opening bar: 130.00...133.00 Pressure> Test inj. tubing : 1 680 750 073 Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450 Start of delivery block Piston stroke mm: 1.0 mm: +-0.02(0.04)> Outlet > Injection-pump setting values Test specifications in parentheses Timing-device travel

1/min: 1500 Charge press. hPa: 1000 Setting value mm: 4.00...4.20 AFB/AFB > Volt: 12

electromagnet>Volt: 12 Supply-pump pressure Speed 1/min: 1500 Charge press hPa: 1000 Setting value bar: 5.20...5.80 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Full-load del. with charge press.: 1/min: 1500 Speed Charge press. hPa: 1000 Del. quantity cm3/ 1000s.: 41.00...42.00 KSB/AFB **Volt: 12** valve Shutoff electromagnet>Volt: 12 Dispersion cm3/: 2.5 1000s.: (2.5) Full-load del. w/out charge press.: 1/min: 750 Speed Del. quantity cm3/ > 1000s.: 28.00...29.09 11 KSB/AFB > Volt: 12 valve Shutoff electromagnet>Volt: 12 Low-idle speed regulation 1/min: 450 Speed Del. quantity cm3/ > 1000s.: 10.00...14.00 KSB/AFB > Volt: 12 valve Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 2.5 > 10005:: (2.5) Full-load speed regulation Speed 1/min: 2500 Charge press hPa: 1000 Del. quantity cm3/ 1000s.: 28.50...32.50 > KSB/AFB > Volt: 12 valve Shutoff electromagnet>Volt: 12 Start:

Speed

valve

Shutoff

Speed 1/min: 100	<pre>+ electromagnet>Volt: 12</pre>
opeca mm. 100	
Del. quantity cm3/: 35.0059.00	1
mind> 1000s.: 35.00	Comply-norm processes characteristics
	+ Supply-pump pressure characteristic:
KSB/AFB	+
Valve > Volt: 12	1st speed 1/min: 2300
Shutoff	+ Charge press. hPa: 1000
electromagnet>Volt: 12	+ Supply-pump
cecet diagraty vote. 12	7 70 7 00
	+ pressure> bar: 7.307.90
Inspection-pump test specifications	+ KSB/AFB
	+ valve > Volt: 12
Test specifications in parentheses	
	→ Shutoff
Timing-device characteristic:	+ electromagnet>Volt: 12
raining device character iscit.	T electionagnet/vott. 12
	4 3rd speed 1/min: 1500
2nd speed 1/min: 2000	+ Charge press. hPa: 1000
Change appear hose 4000	
Charge press hPa: 1000	+ Supply-pump
TD travel mm: 6.507.10	+ pressure> bar: 5.205.80
> mm: (6.207.40)	+ KSB/AFB
· · · · · · · · · · · · · · · · · · ·	
KSB/AFB	+ valve > Volt: 12
valve > Volt: 12	+ Shutoff
	T Shutoi i
Shutoff	+ electromagnet>Volt: 12
electromagnet>Volt: 12	+ 4th speed 1/min: 1000
7-d d A/-i 4000	
3rd speed 1/min: 1500	+ Charge press. hPa: 1000
Charge press hPa: 1000	+ Supply-pump
	+ pressure> bar: 3.904.50
> mm: (3.504.70)	+ KSB/AFB
KSB/AFB	
	+ valve > Volt: 12
valve > Volt: 12	+ Shutoff
Shutoff	+ electromagnet>Volt: 12
	T etectionagnet/vott. 12
electromagnet>Volt: 12	+
4th speed 1/min: 1000	Overlow quantity at overflow valve:
	over tow qualities at over 1 tow vacve.
Charge press hPa: 1000	<u>†</u>
TD travel mm: 1.101.70	+ 1st speed 1/min: 750
> mm: (0.802.00)	
	+ Charge press. hPa: -
KSB/AFB	+ KSB/AFB
valva > Vol+• 12	
valve > Volt: 12	
valve > Volt: 12 Shutoff	+ Shutoff
Shutoff	+ Shutoff
Shutoff electromagnet>Volt: 12	+ Shutoff + electromagnet>Volt: 12
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300	+ Shutoff + electromagnet>Volt: 12 + Overflow : 41.7086.18
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300	+ Shutoff + electromagnet>Volt: 12 + Overflow : 41.7086.18
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000	+ Shutoff + electromagnet>Volt: 12 - Overflow : 41.7086.18 + quantity> cm3/10s: (26.7098.18)
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel	+ Shutoff + electromagnet>Volt: 12 - Overflow : 41.7086.18 - quantity> cm3/10s: (26.7098.18) - 2nd speed 1/min: 2300
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000	+ Shutoff + electromagnet>Volt: 12 - Overflow : 41.7086.18 - quantity> cm3/10s: (26.7098.18) - 2nd speed 1/min: 2300
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel	Shutoff electromagnet>Volt: 12 Overflow: 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed: 1/min: 2300 Charge press. hPa: 1000
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00)
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B > mm: (1.304.70) B	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B > mm: (1.304.70) B KSB/AFB	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00)
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B > mm: (1.304.70) B KSB/AFB	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00)
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery-quant. and breakaway char.:
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B > mm: (1.304.70) B KSB/AFB valve > Volt: - Shutoff	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery-quant. and breakaway char.: 1nd speed 1/min: 1100
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B > mm: (1.304.70) B KSB/AFB valve > Volt: - Shutoff	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery-quant. and breakaway char.: 1nd speed 1/min: 1100
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery-quant. and breakaway char.: 1nd speed 1/min: 1100 Charge-air pressure-setting
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B > mm: (1.304.70) B KSB/AFB valve > Volt: - Shutoff electromagnet>Volt: 12 9th speed 1/min: 400	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery—quant. and breakaway char.: 1nd speed 1/min: 1100 Charge—air pressure—setting point> hPa: 350*
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B > mm: (1.304.70) B KSB/AFB valve > Volt: - Shutoff electromagnet>Volt: 12 9th speed 1/min: 400 Charge press. hPa: 1000	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery-quant. and breakaway char.: 1nd speed 1/min: 1100 Charge-air pressure-setting
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B > mm: (1.304.70) B KSB/AFB valve > Volt: - Shutoff electromagnet>Volt: 12 9th speed 1/min: 400 Charge press. hPa: 1000	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery-quant. and breakaway char.: 1nd speed 1/min: 1100 Charge-air pressure-setting point> hPa: 350* KSB/AFB
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B > mm: (1.304.70) B KSB/AFB valve > Volt: - Shutoff electromagnet>Volt: 12 9th speed 1/min: 400 Charge press. hPa: 1000 TD travel mm: 0.502.50 A	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery—quant. and breakaway char.: 1nd speed 1/min: 1100 Charge—air pressure—setting point> hPa: 350* KSB/AFB valve > Volt: 12
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B > mm: (1.304.70) B KSB/AFB valve > Volt: - Shutoff electromagnet>Volt: 12 9th speed 1/min: 400 Charge press. hPa: 1000 TD travel mm: 0.502.50 A > mm: (0.003.20) A	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery—quant. and breakaway char.: 1nd speed 1/min: 1100 Charge—air pressure—setting point> hPa: 350* KSB/AFB valve > Volt: 12 Shutoff
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B > mm: (1.304.70) B KSB/AFB valve > Volt: - Shutoff electromagnet>Volt: 12 9th speed 1/min: 400 Charge press. hPa: 1000 TD travel mm: 0.502.50 A > mm: (0.003.20) A	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery—quant. and breakaway char.: 1nd speed 1/min: 1100 Charge—air pressure—setting point> hPa: 350* KSB/AFB valve > Volt: 12 Shutoff
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B > mm: (1.304.70) B KSB/AFB valve > Volt: - Shutoff electromagnet>Volt: 12 9th speed 1/min: 400 Charge press. hPa: 1000 TD travel mm: 0.502.50 A > mm: (0.003.20) A KSB/AFB	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery—quant. and breakaway char.: 1nd speed 1/min: 1100 Charge—air pressure—setting point> hPa: 350* KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B > mm: (1.304.70) B KSB/AFB valve > Volt: - Shutoff electromagnet>Volt: 12 9th speed 1/min: 400 Charge press. hPa: 1000 TD travel mm: 0.502.50 A > mm: (0.003.20) A KSB/AFB valve > Volt: -	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery—quant. and breakaway char.: 1nd speed 1/min: 1100 Charge—air pressure—setting point> hPa: 350* KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 35.0036.00
Shutoff electromagnet>Volt: 12 5th speed 1/min: 2300 Charge press. hPa: 1000 TD travel mm: 7.908.50 > mm: (7.608.80) KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 8th speed 1/min: 1100 Charge press. hPa: 1000 TD travel mm: 2.004.00 B > mm: (1.304.70) B KSB/AFB valve > Volt: - Shutoff electromagnet>Volt: 12 9th speed 1/min: 400 Charge press. hPa: 1000 TD travel mm: 0.502.50 A > mm: (0.003.20) A KSB/AFB	Shutoff electromagnet>Volt: 12 Overflow : 41.7086.18 quantity> cm3/10s: (26.7098.18) 2nd speed 1/min: 2300 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00) Delivery—quant. and breakaway char.: 1nd speed 1/min: 1100 Charge—air pressure—setting point> hPa: 350* KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12

2. d. m. a.d 4 (1 2000	al .
2nd speed 1/min: 2900	1 1mh mand 1/min /50
Charge press. hPa: 1000	1st speed 1/min: 450
KSB/AFB	bel. quantity cm3/: 0.003.00
valve > Volt: 12	+ > 1000s.: (0.003.00)
Shutoff	+ Shutoff
electromagnet Volt: 12	+ electromagnet>volt: -
Del. quantity cm3/: 0.003.00	Talla dalduamu
> 1000s.: (0.003.00)	† Idle delivery:
3rd speed 1/min: 2700	100
Charge press. hPa: 1000	1st speed 1/min: 450
KSB/AFB	+ XSB/AFB
valve > Volt: 12	+ valve > Volt: 12
Shutoff	+ Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12
Del. quantity cm3/: 4.5012.50	+ Del. quantity cm3/: 10.0014.00
> 1000s.: (3.5013.50)	+ > 1000s.: (7.0017.00)
5th speed 1/min: 2500	Dispersion cm3/: 2.5
Charge press. hPa: 1000	+ > 1000s.: (2.5)
KSB/AFB	+ 2nd speed 1/min: 550
valve > Volt: 12	+ KSB/AFB
Shutoff	+ valve > Volt: 12
electromagnet>Volt: 12	+ Shutoff
Del. quantity cm3/: 28.5032.50	+ electromagnet>Volt: 12
> 1000s.: (25.5035.50)	+ Del. quantity cm3/: 0.003.00
9th speed 1/min: 2300	+ > 1000s.: (0.003.00)
Charge press. hPa: 1000	+ 3rd speed 1/min: 400
KSB/AFB	+ KSB/AFB
valve > Volt: 12	+ valve > Volt: 12
Shutoff	+ Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12
Del. quantity cm3/: 40.5042.50	+ Del. quantity cm3/: 20.5025.50
> 1000s.: (39.2043.80)	†
12th speed 1/min: 1500	+ Automatic starting fuel delivery:
Charge press. hPa: 1000	†
KSB/AFB	+ 1st speed 1/min: 300
valve > Volt: 12	+ KSB/AFB
Shutoff	+ valve > Volt: 12
electromagnet>Volt: 12	+ Shutoff
Del. quantity cm3/: 41.0042.00	+ electromagnet>Volt: 12
> 1000s.: (39.5043.50)	bel. quantity cm3/: 37.9057.00
18th speed 1/min: 750	† > 1000s.: (37.0057.00)
Charge press. hPa: -	† • • • • • • • • • • • • • • • • • • •
KSB/AFB	+ 2nd speed 1/min: 600
valve > Volt: 12	+ KSB/AFB
Shutoff	+ valve > Volt: 12
electromagnet>Volt: 12	+ Shutoff
Del. quantity cm3/: 28.0029.00	+ electromagnet>Volt: 12
> 1000s.: (26.0031.00)	+ Del. quantity cm3/: 14.0034.00
20th speed 1/min: 750	+ > 1000s.: (14.0034.00)
Charge press. hPa: 1000	† *** *** ***
KSB/AFB	+ 4th speed 1/min: 100
valve > Volt: 12	+ KSB/AFB
Shutoff	+ valve > Volt: 12
electromagnet>Volt: 12	+ Shutoff
Del. quantity cm3/: 39.5042.00	+ electromagnet>Volt: 12
> 1000s.: (38.0043.00)	+ Del. quantity cm3/: 35.0059.00
	+ > 1000s.: (35.0059.00)
	Chuhadé al antmananta
Floring shoulds:	+ Shutoff electromagnet:
Electr. shutoff:	†

L20

Cut-in

>min voltage : 10.0 Rated voltage : 12.0

Mounting and assembly dimensions:

Designation

K mm: 3.2...3.4 KF mm: 5.2...5.6 MS mm: 1.0...1.4 Ya mm: 37.2...39.2 Yb mm: 40.4...49.0

Remarks:

Operate control lever after each manifold-pressure compensator pressure change.

* Correction at adjusting nut

A = KSB adjustment point B = KSB curve point

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor—head end

Note inst. in remarks column

Test scheet : VWW

Edition : 08.02.95

replaces

Calibrating oil : ISO-4113

Injection pump : VE5/8F2100L545-1

: 0 460 485 020 Type number

Customer Part-No. :

Customer-specific information

Customer

: 2.4L. SD T4 Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00

Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 000 assembly>

Opening

bar: 147.00...150.00 Pressure>

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00

x Length> mm: 840

Start of delivery block Piston stroke mm: 1.0

mm: + 0.02(0.05)

Outlet >

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1250 Speed

Setting value mm: 2.20...2.60

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1250 Speed

Setting value bar: 5.70...6.30

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

1/min: 1250 Speed

Del. quantity cm3/ > 1000s.: 36.00...37.00 Dispersion cm3/: 2.0

1000s.: (3.0)

Residual-Delivery Setting

1/min: 540 Speed

Del. quantity cm3/

1000s.: 6.50...7.50

Shutoff

electromagnet Volt: 12

Full-load speed regulation

1/min: 2400 Speed

Del. quantity cm3/ > 1000s.: 10.00...14.00

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100

Del. quantity cm3/: 35.00...85.00 mind> 1000s.: 35.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Ini.-qty.dif.measurement:

1/min: 1500 Speed

cm3/ Inj.-qty.

difference> 1000s.: -3.50...-9.50 #

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

1.Speed 1/min: 1500

TD-travel

mm: -0.3...-0.5 # difference>

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

2nd speed 1/min: 1790

mm: 5.00...5.80 8th speed Shutoff 1/min: 2300 TD travel > mm: (4.70...6.10) electromagnet>Volt: 12
Del. quantity cm3/: 17.00...27.00
> 1000S.: (16.00...28.00)
9th speed 1/min: 2100 Shutoff electromagnet>Volt: 12 1/min: 1250 3rd speed mm: 2.20...2.60 mm: (1.70...3.10) TD travel 9th speed Shutoff electromagnet>Volt: 12
Del. quantity cm3/: 30.00...32.00
> 1000s.: (28.80...33.20) Shutoff electromagnet>Volt: 12 4th speed 1/min: 1000 1/min: 1250 mm: 0.70...1.50 12th speed TD travel mm: (0.40...1.80) Shutoff Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 36.00...37.00 > 1000s.: (34.30...38.70) electromagnet>Volt: 12 1/min: 600 20th speed Supply-pump pressure characteristic: Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 32.30...35.30 > 1000S.: (30.80...36.80) 1/min: 1000 1st speed Supply-pump pressure> bar: 5.00...5.60 Shutoff electromagnet>Volt: 12 1/min: 1250 2nd speed Supply-pump Electr. shutoff: pressure> bar: 5.70...6.30 1/min: 415 Shutoff 1st speed Del. quantity cm3/: 0.00...3.00 electromagnet>Volt: 12 1/min: 1790 3rd speed 1000s.: (0.00...3.00) Supply-pump Shutoff pressure> bar: 7.20...7.80 electromagnet>volt: bar: (7.00...8.00) Shutoff Damper set qty.: electromagnet>Volt: 12 LFG-setting: Overlow quantity at overflow valve: Idle delivery: 1/min: 600 1st speed 1/min: 415 Shutoff 1st speed electromagnet>Volt: 12 Shutoff Overflow : 41.70...83.40 quantity> cm3/10s: (27.80...97.30) electromagnet Volt: 12 Del. quantity cm3/: 7.00...9.00 > 1000S.: (4.00...12.00) 2nd speed 1/min: 2100 Shutoff electromagnet>Volt: 12 Rest delivery: Overflow : 55.60...139.90 quantity> cm3/10s: (41.70...152.90) 1/min: 540 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 6.50...7.50 > 1000S.: (5.00...9.00) Delivery-quant. and breakaway char.: 2nd speed 1/min: 2600 2nd speed 1/min: 490 Shutoff Shutoff electromagnet Volt: ②
Del. quantity cm3/: 6.80...8.80
> 1000S.: (5.30...10.30) electromagnet Volt: 12 Del. quantity cm3/: 0.00...6.00 > 1000s.: (0.00...6.00) 5th speed 1/min: 2400 5th speed Shutoff Load-dependent start of delivery: electromagnet>Volt: 12 Del. quantity cm3/: 10.00...14.00 Inj.-qty.dif.measurement: 1000s.: (8.00...16.00) 1/min: 1500 1st speed

Inj.-qty. cm3/ : -6.0...-8.0 ' difference> 1000S.: (-6.0...-8.0) 1 Shutoff electromagnet>Volt: 12 1/min: 1500 3rd speed Inj.-aty. cm3/: -3.5...-9.5 # diffe nce> 1000s.: (-2.5...-10.5)# Shutc electromagnet>Volt: 12 TD-travel dif.measurement: correttore anticipo iniezione (SV): 1st speed 1/min: 1500 : -0.3...-0.5 # TD-travel difference> mm: (-0.3...-0.5) # Shutoff

electromagnet>Volt: 12

SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump—

pressure > : -0.1...-0.3 ' difference> bar: (-0.2...-0.2) '

Shutoff

electromagnet>Volt: 12

Automatic starting fuel delivery:

1st speed 1/min: 180 Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 35.00...85.00 > 1000S.: (35.00...85.00)

2nd speed 1/min: 380

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 17.00...37.00 > 1000s.: (17.00...37.00)

4th speed 1/min: 100 Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 35.00...85.00 > 1000s.: (35.00...85.00)

Shutoff electromagnet:

Cut-in

>min voltage : 10.0 Rated voltage : 12.0

Mounting and assembly dimensions:

Designation

K mm: 3.2...3.4 KF mm: 5.6...6.0 MS mm: 1.2...1.6 Ya mm: 32.8...34.8 Yb mm: 60.5...61.5

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position
Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

On initial measurement, screw in residual-quantity adjusting screw 2 mm.

Following pump adjustment, screw out residual-quantity adjusting screw 2 mm.

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

Note inst. in remarks column

: WW Test scheet Edition : 03.02.95

replaces

Calibrating oil : ISO-4113

: VE5/8F2100L525-5 Injection pump

: 0 460 485 022 Type number Customer Part-No. :

Customer-specific information

Customer

: 2.4L SD - T4 Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil

return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 000 assembly>

Opening

bar: 147.00...150.00 Pressure>

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00

x Length> mm: 840

Start of delivery block Piston stroke mm: 1.0

mm: +0.02(0.05)

Outlet >

Injection pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1500 Speed

Setting value mm: 4.10...4.50

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1500 Speed

Setting value bar: 7.10...7.70

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 1250

Del. quantity cm3/

1000s.: 35.00...36.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.0 1000s.: (3.0)

Residual-Delivery Setting

1/min: 540 Speed

Del. quantity cm3/

1000s.: 6.50...7.50

Shutoff

electromagnet Volt: 12

Full-load speed regulation

1/min: 2400 Speed

Del. quantity cm3/

1000s.: 10.00...14.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100
Del. quantity cm3/: 35.00...85.00
mind> 1000S.: 35.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1500

cm3/Inj.-qty.

difference> 1000S.: -7.50...-13.50#

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

1.Speed 1/min: 1500

TD-travel

difference> mm: -1.1...-1.3 #

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

	+ > 1000s.: (8.0016.00)
2nd speed 1/min: 1790	1 8th speed 1/min: 2300
TD travel mm: 5.906.70	+ Shutoff
> mm: (5.607.00)	+ electromagnet>Volt: 12
Shutoff	+ Del. quantity cm3/: 17.0027.00
electromagnet>Volt: 12	+ > 1000s.: (16.0028.00)
3rd speed 1/min: 1500	+ 9th speed 1/min: 2100
TD travel mm: 4.104.50	+ Shutoff
> mm: (3.605.00)	+ electromagnet>Volt: 12
Shutoff	+ Del. quantity cm3/: 28.5030.50
electromagnet>Volt: 12	+ > 1000s.: (27.3031.70)
4th speed 1/min: 1100	+ 11th speed 1/min: 1850
TD travel mm: 1.202.00	+ Shutoff
> mm: (0.902.30)	+ electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 29.5035.50
electromagnet>Volt: 12	+ > 1000S.: -
	+ 12th speed 1/min: 1250
Supply-pump pressure characteristic:	+ Shutoff
	+ electromagnet>Volt: 12
1st speed 1/min: 1100	+ Del. quantity cm3/: 35.0036.00
Supply-pump	+ > 1000s.: (33.3037.70)
pressure> bar: 5.906.50	+ 20th speed 1/min: 600
Shutoff	+ Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12
2nd speed 1/min: 1500	+ Del. quantity cm3/: 31.8034.80
Supply-pump	+ > 1000s.: (30.3036.30)
pressure> bar: 7.107.70	+
Shutoff	+
electromagnet>Volt: 12	+ Mech. shutoff:
3rd speed 1/min: 1790	+
Supply-pump	+ 1st speed 1/min: 2100
pressure> bar: 7.808.40	+ Del. quantity cm3/: 0.003.00
Shutoff	+ > 1000s.: (0.003.00)
electromagnet>Volt: 12	+ Shutoff
Complete months and beautiful and an analysis	+ electromagnet>volt: 12
Overlow quantity at overflow valve:	Floore shortess.
1at aread 1 India 200	+ Electr. shutoff:
1st speed 1/min: 600 Shutoff	T 1et speed 1/min. /15
	1st speed 1/min: 415
electromagnet>Volt: 12 Overflow: 41.7083.40	+ Del. quantity cm3/: 0.003.00 + > 1000s.: (0.003.00)
quantity> cm3/10s: (27.8097.30)	+ Shutoff
2nd speed 1/min: 2100	electromagnet>volt: -
Shutoff	I etecti diagnet/vott.
electromagnet>Volt: 12	Damper set qty.:
Overflow : 55.60139.90	- bamper see deye.
quantity> cm3/10s: (41.70152.90)	LFG-setting:
444410101010101010101010101010101010101	
Delivery-quant. and breakaway char.:	+ Idle delivery:
	+
	+ 1st speed 1/min: 415
2nd speed 1/min: 2600	+ Shutoff
Shutoff	+ electromagnet Volt: 12
electromagnet Volt: 12	+ Del. quantity cm3/: 7.009.00
Del. quantity cm3/: 0.006.00	+ > 1000s.: (4.0012.00)
> 1000s.: (0.006.00)	†
5th speed 1/min: 2400	+ Rest delivery:
Shutoff	†
electromagnet>Volt: 12	+ 1st speed 1/min: 540
Del. quantity cm3/: 10.0014.00	+ Shutoff

electromagnet>Volt: 12
Del. quantity cm3/: 6.50...7.50
> 1000s.: (5.00...9.00) 1000s.: (35.00...85.00) 2nd speed 1/min: 380 1/min: 465 2nd speed Shutoff Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 17.00...37.00 > 1000s.: (17.00...37.00) electromagnet Volt: 12 Del. quantity cm3/: 7.00...9.00 > 1000s.: (4.00...12.00) 4th speed 1/min: 100 Shutoff Load-dependent start of delivery: electromagnet>Volt: 12 Del. quantity cm3/: 35.00...85.00 > 1000S.: (35.00...85.00) Inj.-qty.dif.measurement: 1st speed 1/min: 1500 Inj.-qty. cm3/ : -7.5...-13.5# difference> 1000s.: (-6.5...-14.5)# Shutoff electromagnet: Shutoff electromagnet>Volt: 12 Cut-in 3rd speed 1/min: 1500 >min voltage : 10.0 Inj.-qty. cm3/: -6.0...-8.0 'difference> 1000S.: (-6.0...-8.0) ' Rated voltage : 12.0 Shutoff Mounting and assembly dimensions: electromagnet>Volt: 12 5th speed 1/min: 1500 Designation cm3/: 0.0...+3.00 *mm: 3.2...3.4 Inj.-qty. K difference> 1000S.: (0.0...+3.00) * KF mm: 5.6...6.0 mm: 1.3...1.5 Shutoff MS mm: 32.8...34.8 mm: 61.5...68.5 electromagnet>Volt: 12 Ya Yb TD-travel dif.measurement: correttore anticipo iniezione (SV): Aiustement Potentiometer: 1st speed 1/min: 1500 Angle for > : -1.1...-1.3 # mm: (-1.1...-1.3) # TD-travel difference> °: 25...35 Shutoff Supply voltage pot. volt: 5.00 electromagnet>Volt: 12 2nd speed 1/min: 1500 Output volt : -1.9...-2.3 * mm: (-1.5...-2.7) * TD-travel volt: 0.70 pot. difference> Remarks: SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 On initial measurement, screw in Supply pumpresidual-quantity adjusting screw 2 mm. pressure > : -0.1...-0.3 ' bar: (-0.1...-0.3) ' difference> Following pump adjustment, screw out Shutoff residual quantity adjusting screw 2 mm. electromagnet>Volt: 12 3rd speed 1/min: 1500 Ya = Distance between VE flange and Supply pumpspeed-control lever in idle : -0.8...-1.2 * pressure > position difference> bar: (-0.6...-1.4) *Measurement point = edge of control lever on drive end Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: Yb = Distance between VE flange and speed-control lever in rated speed 1/min: 180 1st speed position Shutoff Measurement point = edge of control electromagnet>Volt: 12 lever on distributor-head end Del. quantity cm3/: 35.00...85.00

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

Note inst. in remarks column

Test scheet

Edition : 03.02.95

replaces

Calibrating oil : ISO-4113

: VE5/8F2100L457-2 Injection pump

: 0 460 485 023 Type number

Customer Part-No. :

Customer-specific information

Customer

Engine : 2.4L SD - T4

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating oil

return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 000 assembly>

Opening

bar: 147.00...150.00 Pressure>

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00

mm: 840 x Lenath>

Start of delivery block

Piston stroke mm: 1.0

mm: +0.02(0.05)

Outlet >

Injection-pump setting values Test specifications in parentheses

Timing device travel

1/min: 1500 Speed

Setting value mm: 4.10...4.50

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1500 Speed

Setting value bar: 7.10...7.70

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

1/min: 1250 Speed

Del. quantity cm3/

1000s.: 35.00...36.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.01000s.: (3.0)

Residual-Delivery Setting

Speed 1/min: 540

Del. quantity cm3/

1000s.: 6.50...7.50

Shutoff

electromagnet Volt: 12

Full-load speed regulation

1/min: 2400 Speed

Del. quantity cm3/

1000s.: 10.00...14.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 35.00...85.00 mind> 1000s.: 35.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1500

cm3/ Inj.-qty.

difference> 1000s.: -7.50...-13.50#

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

1/min: 1500 1.Speed

TD-travel

mm: -1.1...-1.3 # difference>

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

	+ > 1000s.: (8.0016.00)
2nd speed 1/min: 1790	8th speed 1/min: 2300
TD travel mm: 5.906.70	Shutoff
> mn: (5.607.00)	+ electromagnet>Volt: 12
Shutoff	<pre>Del. quantity cm3/: 17.0027.00</pre>
electromagnet>Volt: 12	> 1000s.: (16.0028.00)
3rd speed 1/min: 1500	9th speed 1/min: 2100
TD travel mm: 4.104.50	+ Shutoff
> mm: (3.605.00)	electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 28.5030.50
electromagnet>Volt: 12	+ > 1000s.: (27.3031.70)
4th speed 1/min: 1100	11th speed 1/min: 1850
TD travel mm: 1.202.00	- Shutoff
> mm: (0.902.30)	electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 29.5035.50
electromagnet>Volt: 12	+ > 1000s.: -
- O	12th speed 1/min: 1250
Supply-pump pressure characteristic:	- Shutoff
1at annual 1/min. 1100	electromagnet>Volt: 12
1st speed 1/min: 1100	Del. quantity cm3/: 35.0036.00 > 1000s.: (33.3037.70)
Supply-pump pressure> bar: 5.906.50	20th speed 1/min: 600
pressure> bar: 5.906.50	+ Shutoff
electromagnet>Volt: 12	electromagnet>Volt: 12
2nd speed 1/min: 1500	Del. quantity cm3/: 31.8034.80
Supply-pump	> 1000s.: (30.3036.30)
pressure bar: 7.107.70	
Shutoff	
electromagnet>Volt: 12	
3rd speed 1/min: 1790	Electr. shutoff:
Supply-pump	Ecceli. Silatori.
pressure bar: 7.808.40	1st speed 1/min: 415
Shutoff	Del. quantity cm3/: 0.003.00
electromagnet>Volt: 12	> 1000s.: (0.003.00)
	Shutoff
Overlow quantity at overflow valve:	electromagnet>volt: -
	•
1st speed 1/min: 600	Damper set qty.:
Shutoff -	+
electromagnet>Volt: 12	LFG-setting:
Overflow : 41.7083.40 -	-
quantity> cm3/10s: (27.8097.30)	- Idle delivery:
2nd speed 1/min: 2100 -	
Shutoff -	1st speed 1/min: 415
electromagnet>Volt: 12	- Shutoff
Overflow : 55.60139.90	electromagnet Volt: 12
quantity> cm3/10s: (41.70152.90) -	Del. quantity cm3/: 7.009.00
Self-ren mark and therefore an about	> 1000s.: (4.0012.00)
Delivery-quant. and breakaway char.:	Dark daliburan
	Rest delivery:
2nd chood 1/min. 2600	t 1st speed 1/min. 5/0
2nd speed 1/min: 2600 - Shutoff	- 1st sp ee d 1/min: 540 - Shutoff
electromagnet Volt: 12 Del. quantity cm3/: 0.006.00	electromagnet>Volt: 12 Del. quantity cm3/: 6.507.50
> 1000S.: (0.006.00)	PEC QUESTITY CHO/, U.JU/.JU
5th speed 1/min: 2400	L > 1000 + (5 00 0 00)
	- > 1000s.: (5.009.00) - 2nd speed 1/min: 490
	- 2nd speed 1/min: 490
Shutoff	- 2nd sp ee d 1/min: 490 - Shutoff
	- 2nd speed 1/min: 490

1000s.: (5.30...10.30) 1/min: 100 4th speed Shutoff Load-dependent start of delivery: electromagnet>Volt: 12 Del. quantity cm3/: 35.00...85.00 > 1000S.: (35.00...85.00) Inj.-qty.dif.measurement: 1st speed 1/min: 1500 Inj.—qty. cm3/ : -7.5...-13.5# difference> 1000s.: (-6.5...-14.5)# Shutoff electromagnet: Shutoff Cut-in electromagnet>Voit: 12 3rd speed 1/min: 1500 >min voltage : 10.0 cm3/: -6.0...-8.0 ' Inj.-qty. Rated voltage : 12.0 difference> 1000s.: (-6.0...-8.0) ' Shutoff Mounting and assembly dimensions: electromagnet>Volt: 12 1/min: 1500 5th speed Designation cm3/: 0.0...+3.00 * mm: 3.2...3.4 Ini.-qty. difference> 1000s.: (0.0...+3.00) ***KF** mm: 5.6...6.0 mm: 1.3...1.5 Shutoff MS electromagnet>Volt: 12 mm: 32.8...34.8 Ya Yb mm: 60.5...71.5 TD-travel dif.measurement: correttore anticipo iniezione (SV): 1st speed 1/min: 1500 Remarks: • TD-travel : -1.1...-1.3 # difference> mm: (-1.1...-1.3) # On initial measurement, screw in Shutoff residual-quantity adjusting screw 2 mm. electromagnet>Volt: 12 2nd speed 1/min: 1500 Following pump adjustment, screw out : -1.9...-2.3 * TD-travel residual-quantity adjusting screw 2 mm. mm: (-1.5...-2.7) * difference> Ya = Distance between VE flange and SP press.-dif.measurement: speed-control lever in idle pompa di mandata (FP): position 1/min: 1500 1st speed Measurement point = edge of control Lever on drive end Supply pumppressure > : -0.1...-0.3 ' difference> bar: (-0.1...-0.3) ' Shutoff Yb = Distance between VE flange and speed-control lever in rated speed electromagnet>Volt: 12 1/min: 1500 position 3rd speed Supply pump-Measurement point = edge of control pressure > : -0.8...-1.2 * lever on distributor-head end bar: (-0.6...-1.4) *difference> Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: Permissible port/port scatter with stop test, electrical = max. 5.0 1/min: 180 1st speed ccm/1000 S. Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 35.00...85.00 1000s.: (35.00...85.00) 1/min: 380 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 17.00...37.00 > 1000\$.: (17.00...37.00)

Note inst. in remarks column

Test scheet : VWW : 06.02.95 Edition

replaces

: ISO-4113 Calibrating oil

: VE5/8F2100L632 Injection pump : 0 460 485 024 Type number

Customer Part-No. :

Customer-specific information

Customer : W

: 2.4L SD - T4 **Engine**

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 000 assembly>

Opening |

bar: 147.00...150.00 Pressure>

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 840 x Length>

Start of delivery block Piston stroke mm: 1.0

mm: +0.02(0.05)

Outlet >

Injection-pump setting values Test specifications in parentheses

Timing-device travel

Speed 1/min: 1250

Setting value mm: 2.20...2.60

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1250 Speed

Setting value bar: 5.70...6.30

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

1/min: 1250 Speed

Del. quantity cm3/

1000s.: 36.00...37.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.0 1000s.: (3.0)

Full-load speed regulation

1/min: 2400 Speed

Del. quantity cm3/

1000s.: 10.00...14.00 >

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100 Speed

Del. quantity cm3/: 35.00...85.00 mind> 1000s.: 35.00

mind>

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1500

Inj.-qty. cm3/

difference> 1000s.: -3.50...-9.50#

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

1/min: 1500 1.Speed

TD-travel

mm: -0.3...-0.5 # difference>

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

1/min: 1790 2nd speed

mm: 5.00...5.80 TD travel mm: (4.70...6.10)

Shutoff

electromagnet>Volt: 12 1/min: 1250 3rd speed

mm: 2.20...2.60 TD travel

_		(4 70 7 40)				40
>	mn:	(1.703.10)	+	electromagne	t>Volt:	12
Shutoff			+	Del. quantit	y cm3/:	30.0032.00
electromagnet>V	olt:	12	+	> '	1000s.:	(28.8033.20)
4th speed 1/1			1	12th speed		
		0.701.50	Ŧ		17111111	1230
TD travel			T	Shutoff		43
>	nm:	(0.401.80)	+	electromagne	t>volt:	72
Shutoff			+	Del. quantit	y cm3/:	36.0037.00
electromagnet>V	olt:	12	+	>	1000s.:	(34.3038.70)
			1	20th speed	1/min	600
Simply-piers and	CCI ID	e characteristic:	1.	Shutoff	17 111 11	000
supply built bile	35U! (e character istic.	T			43
		4000	†	electromagne	t>volt:	12
1st speed 1/i	min:	1000	+	Del. quantit	y cm3/:	32.3035.30
Supply-pump			+	>	1000s.:	(30.8036.80)
pressure>	bar:	5.005.60	+			
Shutoff		51001115105	\perp			
	-14.	13	T			
electromagnet>V	ort:	12	†			
2nd speed 1/1	:חדת	1250	+	Electr. shut	off:	
Supply-pump			+			
pressure>	har.	5.706.30	1	1st speed	1/min:	415
Shutoff	oui.	3.101.10.30	1	Del. quantit		
		43	T	per quantit	40000	(0.003.00
electromagnet>V	olt:	12	†		10005.:	(0.003.00)
3rd speed 1/1	min:	1790	+	Shutoff		
Supply-pump			+	electromagne	t>volt:	_
pressure>	nar.	7.207.80	1			
Shutoff	· ·		1	Idle deliver		
	_1	43	T	Trife deliver	у.	
electromagnet>V	סנד:	12	†			
			+	1st speed	1/min:	415
Overlow quantity	y at	overflow valve:	+	Shutoff		
and done quanto to	,		\perp	electromagne	+>Val++	12
1at amond 1/	nin:	400	Ŧ	Del. quantit	1 00CL.	200 000
	m er i :	800	T	ver. quantit	y (1157 :	7.007.00
Shutoff			†			(4.0012.00)
electromagnet>Vo	olt:	12	+	Dispersion	cm3/:	2.0
Overflow	:	41.7083.40	+	>	1000s.:	(3.0)
quantity> cm3/			Τ			
2nd speed 1/r	nin:	2100	1	Loadudananda	nt ctant	of delivery:
		2100	T			
Shutoff			†	Injqty.dif	.measure	ement:
electromagnet>Vo	olt:	12	+			
Overflow	:	55.60139.90	+	1st speed	1/min:	1500
quantity> cm3/1		(41.70152.90)	1	Inj. atv. cm	3/ :	-3.59.5 #
qualities ones		(411101111521707	1	difference	10000	(-2.510.5)#
Daldinami miamb		handleria, dans	T		10005	(-2.310.3)#
vetivery-quant.	and	breakaway char.:	†	Shutoff		10
			†	electromagne	t>Volt:	72
			+	3rd speed	1/min:	1500
2nd speed 1/r	ກຳກ:	2600	1	Injqty.	cm3/:	-6.08.0 '
Shutoff	,		1	difference>	10005	(-6.08.0)
	.14.	43	T		10005	(0.0 0.0)
electromagnet Vo			T	Shutoff		40
Del. quantity cr			+	electromagne		
> 1000	DS.:	(0.006.00)	+	5th speed	1/min:	1500
5th speed 1/n	nin:	2400	+	Injqty.	cm3/:	0.0+3.00 *
Shutoff	.,		上	difference>	10005	(0.0+3.00) *
	14.	10	Ŧ		10005	(0.0(3.00)
electromagnet>Vo			T	Shutoff		10
Del. quantity co			†	electromagnet	t>volt:	12
		(8.0016.00)	+			
		2300	∔	TD-travel di	f.measur	ement:
Shutoff			1			iniezione (SV):
	1+.	12	1	1st speed		1500
electromagnet>Vo	フル	15 47 no 27 no	T		17/01/11/15	0.7 0.5 4
Del. quantity cm	10/:	17.0027.00	†	TD-travel		-0.30.5_#
		(16.0028.00)	+	difference>	mm:	(-0.30.5) #
9th speed 1/m	nin:	2100	∔	Shutoff		
Shutoff		= · = =	L	electromagnet	t>Vait.	12

2nd speed 1/min: 1500 : -1.2...-1.6 * TD-travel difference> mm: (-0.8...-2.0) * SP press.—dif.measurement: pompa di mandata (FP): 1/min: 1500 1st speed Supply pump-: -0.1...-0.3 ' pressure > bar: (-0.1...-0.3) ' difference> Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1500 Supply pump-: -0.8...-1.2 * pressure > bar: (-0.6...-1.4) *difference> Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1/min: 180 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 35.00...85.00 1000s.: (35.00...85.00) 2nd speed 1/min: 380 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 17.00...37.00 1000s.: (17.00...37.00) 1/min: 100 4th speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 35.00...85.00 1000s.: (35.00...85.00) Shutoff electromagnet: Cut-in : 10.0 >min voltage Rated voltage : 12.0 Mounting and assembly dimensions: Designation mm: 3.2...3.4 K KF mm: 5.6...6.0 mm: 1.3...1.5 mm: 32.8...34.8 mm: 60.5...71.5 MS Ya Yb Remarks:

On initial measurement, screw in

residual-quantity adjusting screw 2 mm.

Following pump adjustment, screw out residual-quantity adjusting screw 2 mm.

Ya = Distance between VE flange and speed-control lever in idle position
Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

Note inst. in remarks column

Test scheet : VWW

Edition : 06.02.95

replaces

Calibrating oil : ISO-4113

: VE5/8F2100L633 Injection pump Type number : 0 460 485 025

Customer Part-No. :

Customer-specific information

Customer

: 2.4L SD - T4 Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00

Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 000 assembly>

Opening

bar: 147.00...150.00 Pressure>

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00

mm: 840 x Length>

Start of delivery block Piston stroke mm: 1.0

mm: +0.02(0.05)

Outlet >

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1500 Speed

Setting value mm: 4.10...4.50

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1500 Setting value bar: 7.10...7.70

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

1/min: 1250 Speed

Del. quantity cm3/ > 1000s.: 35.00...36.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.0 1000s.: (3.0)

Full-load speed regulation

1/min: 2400 Speed

Del. quantity cm3/

1000s.: 10.00...14.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100
Del. quantity cm3/: 35.00...85.00
mind> 1000S.: 35.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

1/min: 1500 Speed

cm3/Inj.—qty.

difference> 1000s.: -7.50...-13.50#

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

1/min: 1500 1.Speed

TD-travel

difference> mm: -1.1...-1.3 #

Shutoff

electromagnet>Volt: 12

Inspection pump test specifications Test specifications in parentheses

Timing-device characteristic:

2nd speed 1/min: 1790

mm: 5.90...6.70 TD travel mm: (5.60...7.00) >

Shutoff

electromagnet>Volt: 12

1/min: 1500 3rd speed

mm: 4.10...4.50 TD travel

M07

> mm:	(3.605.00)	+	electromagnet>Volt: 12
Shutoff		+	Del. quantity cm3/: 28.5030.50
electromagnet>Volt:	12	+	> 1000s.: (27.3031.70)
4th speed 1/min:	1100	+	12th speed 1/min: 1250
TD travel mm:	1.202.00	+	Shutoff
> mm:	(0.902.30)	1	electromagnet>Volt: 12
Shutoff	(0.702.307	\mathbf{I}	Nel quantity cm3/: 35 00 36 00
electromagnet>Volt:	12	Ι	Del. quantity cm3/: 35.0036.00 > 1000s.: (33.3037.70)
etecti dilagnet > vott.	12	T	20th speed 1/min: 600
Summittee man management	a shanastanistia.	T	Shutoff
Supply-pump pressure	e characteristic:	T	
Ash smooth Almin.	4400	T	electromagnet>Volt: 12
1st speed 1/min:	1100	+	Del. quantity cm3/: 31.8034.80
Supply-pump	F 00 4 F0	+	> 1000s.: (30.3036.30)
	5.906.50	+	
Shutoff		+	
electromagnet>Volt:	12	+	
2nd speed 1/min:	1500	+	Electr. shutoff:
Supply-pump		+	
pressure> bar:	7.107.70	+	1st speed 1/min: 415
Shutoff		+	Del. quantity cm3/: 0.003.00
electromagnet>Volt:	12	1	> 1000s.: (0.003.00)
3rd speed 1/min:	1790	+	Shutoff
Supply-pump		1	electromagnet>volt: -
	7.808.40	1	o cooti onagnos voco:
Shutoff	7.001.10140	1	Idle delivery:
electromagnet>Volt:	12	Ι	idle delivery.
etectionagnet/vott.	12	Ι	1st speed 1/min: 415
Overlow quantity at	eventles valves	T	Shutoff
overtow quantity at	over tow vatve:	T	
Antonion Almini	400	T	electromagnet>Volt: 12
1st speed 1/min:	600	†	Del. quantity cm3/: 7.009.00
Shutoff	40	+	> 1000s.: (4.0012.00)
electromagnet>Volt:	12	+	Dispersion cm3/: 2.0
Overflow :		+	> 1000s.: (3.0)
quantity> cm3/10s:	(27.8097.30)	+	
2nd speed 1/min:	2100	+	Load-dependent start of delivery:
Shutoff		+	<pre>Injqty.dif.measurement:</pre>
electromagnet>Volt:	12	+	
Overflow :	55.60139.90	+	1st speed 1/min: 1500
quantity> cm3/10s:	(41.70152.90)	+	Injqty. cm3/ : -7.513.5#
		+	difference> 1000s.: (-6.514.5)#
Delivery-quant. and	breakaway char.:	+	Shutoff
		+	electromagnet>Volt: 12
		1	3rd speed 1/min: 1500
2nd speed 1/min:	2600	1	Injqty. cm3/: -6.08.0 '
Shutoff	2000	1	difference> 1000S.: (-6.08.0)
electromagnet Volt:	12	1	Shutoff
Del. quantity cm3/:		I	electromagnet>Volt: 12
	(0.006.00)	T	5th speed 1/min: 1500
		T	Tri - why - cm2/+ 0.0 +2.00 +
	2400	T	Inj.—qty. cm3/: 0.0+3.00 *
Shutoff	40	T	difference> 1000\$:: (0.0+3.00) *
electromagnet>Volt:	40.00 47.00	T	Shutoff
Del. quantity cm3/:	(0.00(4.00)	†	electromagnet>Volt: 12
	(8.0016.00)	†	Th. 1 1
8th speed 1/min:	2300	†	TD-travel dif.measurement:
Shutoff	40	+	correttore anticipo iniezione (SV):
electromagnet>Volt:		†	1st speed 1/min: 1500
Del. quantity cm3/:	17.0027.00	+	TD-travel : -1.11.3 #
	(16.0028.00)	+	difference> mm: (-1.11.3) #
9th speed 1/min:	2100	+	Shutoff
Shutoff		+	electromagnet>Volt: 12

2nd speed 1/min: 1500 : -1.9...-2.3 * TD-travel min: (-1.5...-2.7) * difference> SP press.-dif.measurement:

pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump-

pressure > : -0.1...-0.3 ' difference> bar: (-0.1...-0.3) '

Shutoff

electromagnet>Volt: 12 3rd speed 1/min: 1500

Supply pump-

pressure > : -0.8...-1.2 * difference> bar: (-0.6...-1.4) *

Shutoff

electromagnet>Volt: 12

Automatic starting fuel delivery:

1/min: 180 1st speed Shutoff electromagnet>Volt: 12

Del. quantity cm3/: 35.00...85.00 1000s.: (35.00...85.00)

1/min: 380 2nd speed

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 17.00...37.00 1000s.: (17.00...37.00)

1/mis: 100 4th speed

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 35.00...85.00 > 1000s.: (35.00...85.00)

Shutoff electromagnet:

Cut-in

>min voltage : 10.0 Rated voltage : 12.0

Mounting and assembly dimensions:

Designation

mm: 3.2...3.4 K mm: 5.6...6.0 KF MS mm: 1.3...1.5 Ya rm: 32.8...34.8 Yb mm: 60.5...71.5

Remarks:

On initial measurement, screw in residual-quantity adjusting screw 2 mm. Following pump adjustment, screw out residual-quantity adjusting screw 2 mm.

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 Ś.

Note inst. in remarks column

Test scheet : SEA

Edition : 08.02.95

replaces :-

Calibrating oil : ISO-4113

Injection pump : VE4/9F2300R54-2 Type number : 0 460 494 263

Customer Part-No. :

Customer-specific information

Customer : SEAT

Engine : X0 3972865 1.71.

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating oil

return>temp. > °C

with>thermometer>: 40.00...48.00 Electronically>: 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 000

Opening

Pressure> bar: 147.00...150.00

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

x Lengtry min:

Start of delivery block Piston stroke mm: 1.0

> mm: +-0.02(0.04)

Outlet > : A

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1500

Setting value mm: 4.00...4.40

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1500

Setting value bar: 5.90...6.50

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 1500

Del. quantity cm3/

> 1000s.: 31.00...32.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.5 > 1000s.: (3.0)

Low-idle speed regulation

Speed 1/min: 415

Del. quantity cm3/

> 1000s.: 8.00...12.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 2.0 > 1000s.: (3.0)

Full-load speed regulation

Speed 1/min: 2525

Del. quantity cm3/

> 1000s.: 10.00...14.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 48.00...98.00

mind> 1000s.: 48.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1500

Inj.-qty. cm3/

difference> 1000s.: -11.5...-17.5 #

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

1.Speed 1/min: 1500

TD-travel

difference> mm: -0.4...-0.6 #

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

MIO

	+	electromagnet>Volt: 12
Timing-device charac	cteristic:	Del. quantity cm3/: 10.0014.00 > 1000S.: (8.0016.00)
2nd speed 1/min:	\sim 2250	8th speed 1/min: 2425
TD travel mm:	6.707.50	Shutoff
	(6.407.80)	electromagnet>Volt: 12
Shutoff	T	Dol guartity and/2 20 00 30 00
	12	Del. quantity cm3/: 20.0030.00 > 1000s.: (19.0031.00)
electromagnet>Volt:	1500	
3rd speed 1/min:		9th speed 1/min: 2250
	4.004.40	Shutoff
	(3.504.90)	electromagnet>Volt: 12
Shutoff	10 †	Del. quantity cm3/: 25.0027.00
electromagnet>Volt:	12 +	> 1000s.: (23.8028.20)
4th speed 1/min:	800 +	12th speed 1/min: 1500
	1.502.30	Shutoff
	(1.202.60)	electromagnet>Volt: 12
Shutoff	+	Del. quantity cm3/: 31.5032.50
electromagnet>Volt:	12 +	> 1000s.: (29.5034.50)
	+	20th speed 1/min: 600
Supply-pump pressure	e characteristic:	Shutoff
	+	electromagnet>Volt: 12
1st speed 1/min:	600 +	Del. quantity cm3/: 21.0024.00
Supply-pump	+	> 1000s.: (19.5025.50)
pressure> bar:	3.804.40	
Shutoff	+	
electromagnet>Volt:	12	
2nd speed 1/min:	1500 +	Electr. shutoff:
Supply-pump	1	
pressure> bar:	5.906.50	1st speed 1/min: 415
Shutoff		Del. quantity cm3/: 0.003.00
electromagnet>Volt:	12	> 1000s.: (0.003.00)
3rd speed 1/min:	2250	Shutoff
Supply-pump	1	electromagnet>volt: -
pressure> bar:	7 70 8 30	eceder charginets foce.
Shutoff	1	Idle delivery:
electromagnet>Volt:	12 I	rate decivery.
etetti dilagi letz vott.	T I	1st speed 1/min: 415
Overlow quantity at	overflow valve: I	Shutoff
overtow qualitity at	over tow valve.	
1st speed 1/min:	400 T	electromagnet>Volt: 12
-1 '00	7	Del. quantity cm3/: 8.0012.00
Shutoff	12	> 1000s.: (6.0014.00)
electromagnet>Volt:	14 70 97 /0	Dispersion cm3/: 2.0
Overflow:	41.7083.40	> 1000s.: (3.0)
quantity> cm3/10s:	2250	2nd speed 1/min: 900
2nd speed 1/min:	2250	Shutoff
Shutoff	42	electromagnet>Volt: 12
electromagnet>Volt:	12 +	Del. quantity cm3/: 0.004.00
	55.60139.90 +	> 1000s.: (0.004.00)
quantity> cm3/10s:	(47.70152.90)	
		Load-dependent start of delivery:
Delivery-quant. and	breakaway char.: +	<pre>Injqty.dif.measurement:</pre>
	+	
-	+	3rd speed 1/min: 1500
3rd speed 1/min:	26/5	Injqty. cm3/: -11.517.5
Shutoff	+	difference> 1000s.: (-9.519.5)#
electromagnet>Volt:		Shutoff
Del. quantity cm3/:	0.006.00 +	electromagnet>Volt: 12
> 1000s.:	(0.006.00)	Eth amount 1/min. 1500
		5th speed 1/min: 1500
5th speed 1/min: Shutoff		Injqty. cm3/: +2.0+8.0 * difference> 1000S.: (+2.0+8.0) *

Shutoff electromagnet>Volt: 12 TD-travel dif.measurement: correttore anticipo iniezione (SV): 1st speed 1/min: 1500 TD-travel : -0.4...-0.6 # difference> mm: (-0.4...-0.6) # Shutoff electromagnet>Volt: 12 1/min: 1500 3rd speed : -1.0...-1.4 * TD-travel difference> mm: (-0.6...-1.8) * Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1/min: 1500 1st speed 1/min: 1500 3rd speed Supply pumpcressure > : -0.8...-1.2 * bar: (-0.6...-1.4) *difference> Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1st speed 1/min: 280 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 35.00...85.00 1000s.: (35.00...85.00) 1/min: 480 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 15.00...35.00 > 1000s.: (15.00...35.00) 1/min: 100 4th speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 48.00...98.00 > 1000s.: (48.00...98.00) Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation K mm: 3.3...3.5 **KF** mm: 5.8...6.2

mm: 1.9...2.1 mm: 36.2...40.2

mm: 42.2...52.2

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

MS Ya

Yb

AFB/AFB BOSCH-INJ.-PUMP TEST SPECIFICATIONS Volt: 12 valve > Shutoff electromagnet>Volt: 12 Note inst. in remarks column : FIA Test scheet Supply-pump pressure : 08.02.95 Edition 1/min: 1500 Speed replaces Charge press hPa: 1000 Calibrating oil : ISO-41/3 Setting value bar: 5.80...6.40 : VE4/9F2100R547 Injection pump KSB/AFB Type number : 0 460 494 348 valve > Shutoff Volt: 12 Customer Part-No. : electromagnet>Volt: 12 Full-load del. with charge press.: Customer-specific information Customer : FIAT-AUTO 1/min: 1500 Charge press. hPa: 1000 Del. quantity cm3/ > 1000s.: 45.50...46.50 Engine : M705 VT19.L KW: 60 Power Speed 1/min: 2100 KSB/AFB valve > Volt: 12 Shutoff TEST BENCH REQUIREMENTS electromagnet>Volt: 12 Overflow restricti: 1 463 456 344 Dispersion cm3/: 2.5 1000s.: (2.5) Calibrating-oil return>temp. > °C Full-load del. w/out charge press.: with>thermometer>: 40.00...48.00 Electronically>: 42.00...50.00 1/min: 600 Speed Del. quantity cm3/ 1000s.: 41.00...42.00 Inlet press., bar: 0.30...0.40 KSB/AFB Calibrating nozzle-holder > Volt: 12 valve assembly> : 1 688 901 022 Shutoff electromagnet>Volt: 12 **Opening** bar: 130.00...133.00 Residual-Delivery Setting Pressure> 1/min: 600 Speed Test inj. tubing : 1 680 750 073 Del: quantity cm3/ 1000s.: 4.00...6.00 KSB/AFB Outside diameter : 6.00 x Wall>thickness : 2.00 Volt: 12 valve > Shutoff x Length> mm: 450 electromagnet Volt: 12 Start of delivery block Full-load speed regulation Piston stroke mm: 0.70 mm: +-0.02(0.04)> 1/min: 2300 Outlet > Speed Charge press hPa: 1000 Del. quantity cm3/ Injection-pump setting values 1000s.: 31.00...37.00 Test specifications in parentheses > KSB/AFB Timing device travel > Volt: 12 valve Shutoff 1/min: 1500 electromagnet>Volt: 12 Charge press. hPa: 1000

Start:

Setting value mm: 5.80...6.20

TD travel mm: 4.50...7.50 B Speed 1/min: 100 Del. quantity cm3/: 50.00...80.00 > mm: (4.00...8.00) B KSB/AFB 1000s.: 50.00 mind valve > Volt: -KSB/AFB Shutoff Valve Volt: 12 electromagnet>Volt: 12 1/min: 500 Shutoff 6th speed Charge press. hPa: 1000 TD travel mm: 3.20...4.80 A electromagnet>Volt: 12 Load-dependent start of delivery: mm: (2.50...5.50) A Inj.-qty.dif.measurement: KSB/AFB Volt: valve > 1/min: 1500 Speed Shutoff Inj.-qty. cm3/electromagnet>Volt: 12 difference> 1000s.: -10.0...-18.0 # KSB/AFB Supply-pump pressure characteristic: Volt: 12 valve Shutoff 1/min: 2100 1st speed Charge press. hPa: 1000 electromagnet>Volt: 12 TD-travel dif.measurement Supply-pump bar: 7.50...8.10 pressure> 1/min: 1500 1.Speed KSB/AFB Volt: 12 TD-travel valve difference> mm: -0.8...-1.0 # Shutoff electromagnet>Volt: 12 KSB/AFB 1/min: 1500 valve Volt: 12 2nd speed Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 Supply-pump bar: 5.80...6.40 pressure> Inspection-pump test specifications KSB/AFB Test specifications in parentheses Volt: 12 valve Shutoff Timing-device characteristic: electromagnet>Volt: 12 3rd speed 1/min: 800 1/min: 2100 Charge press. hPa: 1000 2nd speed hPa: 1000 Charge press Supply-pump bar: 3.70...4.30 mm: 8.60...9.40 TD travel pressure> > mm: (8.30...9.70) KSB/AFB KSB/AFB valve **Volt: 12** valve Volt: 12 Shuteff > Shutoff electromagnet>Volt: 12 electromagnet>Volt: 12 1/min: 1500 3rd speed Overlow quantity at overflow valve: Charge press hPa: 1000 mm: 5.80...6.20 TD travel 1st speed 1/min: 600 mm: (5.40...6.60) Charge press. hPa: -KSB/AFB KSB/AFB Volt: 12 > Volt: 12 valve > valve Shutoff Shutoff electromagnet>Volt: 12 electromagnet>Volt: 12 : 75.06...119.54 4th speed 1/min: 800 Overflow hPa: 1000 quantity> cm3/10s: (75.06...119.54) Charge press mm: 1.70...2.50 1/min: 2100 2nd speed TD travel mm: (1.40...2.80) Charge press. hPa: 1000 > KSB/AFB KSB/AFB Volt: 12 valve > Volt: 12 valve Shutoff Shutoff electromagnet>Volt: 12 electromagnet>Volt: 12 : 97.30...180.70 5th speed 1/min: 1000 Overflow quantity> cm3/10s: (97.30...180.70) Charge press. hPa: 1000

Delivery-quant. and breakaway char.:	> 1000s.: (39.0044.00) 20th speed 1/min: 900 Charge press. hPa: 1000 KSB/AFB
And annual Almin, 0004	
1nd speed 1/min: 900*	valve > Volt: 12
Charge air pressure setting +	Shutoff
point> hPa: 350 +	electromagnet>Volt: 12
KSB/AFB +	Del. quantity cm3/: 47.0050.00
valve > Volt: 12	> 1000s.: (46.0051.00)
Shutoff	/ 10003.: (40.0051.00)
electromagnet>Volt: 12	
Del. quantity cm3/: 46.0047.00	
> 1000s.: (44.0049.00)	Electr. shutoff:
3rd speed 1/min: 2650	Eccoti Condcorr.
	Astronomy Alain 150
Charge press. hPa: 1000	1st speed 1/min: 450
KSB/AFB +	Charge press. hPa: -
valve > Volt: 12 +	Del. quantity cm3/: 0.003.00
Shutoff	> 1000s.: (0.003.00)
	Shutoff
electromagnet>Volt: 12	
Del. quantity cm3/: 0.007.00	electromagnet>volt: -
> 1000s.: (0.007.00) +	
4th speed 1/min: 2450	Damper set qty.:
Charge press. hPa: 1000	omipor out doyer
	LEC anthings
KSB/AFB	LFG-setting:
valve > Volt: 12	
Shutoff	Idle delivery:
electromagnet>Volt: 12	
Del. quantity cm3/: 13.0021.00	1st speed 1/min: 450
7	
> 1000s.: (12.0022.00) +	KSB/AFB
5th speed 1/min: 2300 +	valve > Volt: 12
Charge press. hPa: 1000	Shutoff
KSB/AFB	electromagnet Volt: 12
valve > Volt: 12	Del. quantity cm3/: 14.5018.50
Shutoff	> 1000s.: (12.5020.50)
electromagnet>Volt: 12	
Del. quantity cm3/: 31.0037.00	Rest delivery:
> 1000s.: (29.0039.00)	nose actively.
	Act award Almin (00
9th speed 1/min: 2100 +	1st speed 1/min: 600
Charge press. hPa: 1000	KSB/AFB
KSB/AFB +	valve > Volt: 12
valve > Volt: 12	Shutoff
Shutoff	ol octromements Volds 42
	electromagnet>Volt: 12
electromagnet>Volt: 12	Del. quantity cm3/: 4.006.00
Del. quantity cm3/: 45.0048.00	> 1000s.: (3.007.00)
> 1000s.: (44.0049.00) +	2nd speed 1/min: 550
12th speed 1/min: 1500	KSB/AFB
Charge press. hPa: 1000	valve > Volt: 12
KSB/AFB +	Shutoff
valve > Volt: 12 +	electromagnet Volt: 12
Shutoff	Del. quantity cm3/: 5.508.50
electromagnet>Volt: 12	roti qualitity onor i sisoititoiso
Del manditure 7/1 /5 50 // 50	Land day and all the second
Del. quantity cm3/: 45.5046.50	Load-dependent start of delivery:
> 1000s.: (44.0048.00) +	<pre>Injqty.dif.measurement:</pre>
18th speed 1/min: 600 +	
Charge press. hPa: -	1st speed 1/min: 1500
KSB/AFB	Injqty. cm3/ : -9.011.0'
valve > Volt: 12	difference> 1000s.: (-9.011.0)
Shutoff	KSB/AFB
electromagnet>Volt: 12	valve > Volt: 12
Del. quantity cm3/: 41.0042.00	Shutoff
The second secon	कराच्या कर्षा १ र

Del. quantity cm3/: 35.00...45.00 > 1000s.: (35.00...45.00) electromagnet>Volt: 12 1/min: 1500 3rd speed Inj.-qty. cm3/: -10.0..-18.0# difference> 1000s.: (-10.0..-18.0)# 1/min: 100 4th speed KSB/AFB KSB/AFB Volt: 12 Volt: 12 valve valve Shutoff Shutoff electromagnet>Volt: 12 electromagnet>Voit: 12 1/min: 1500 Del. quantity cm3/: 50.00...80.00 5th speed 1000s.: (50.00...80.00) cm3/: 0.00...+3.00* Inj.-qty. difference> 1000s.: (0.00...+3.00)* KSB/AFB Shutoff electromagnet: valve > Volt: 12 Shutoff Cut-in electromagnet>Volt: 12 >min voltage : 10.0 Rated voltage : 12.0 TD-travel dif.measurement: correttore anticipo iniezione (SV): Mounting and assembly dimensions: 1/min: 1500 1st speed TD-travel : -0.8...-1.0 # Designation difference> mm: (-0.8...-1.0) # mm: 3.2...3.4 mm: 5.6...6.0 KF KSB/AFB mm: 1.3...1.7 mm: 37.2...39.2 mm: 36.6...45.4 Volt: 12 valve MS Shutoff Ya electromagnet>Volt: 12 Yb 1/min: 1500 3rd speed : -1.1...-1.7 * Remarks: TD-travel mm: $(-1.0...-1.8) \times$ difference> KSB/AFB valve Volt: 12 Ya = Distance between VE flange and Shutoff speed-control lever in idle position electromagnet>Volt: 12 Measurement point = edge of control lever on drive end SP press.—dif.measurement: pompa di mandata (FP): 1/min: 1500 1st speed Supply pump-Yb = Distance between VE flange and : -0.1...-0.3 ' speed-control lever in rated speed pressure > difference> bar: (-0.1...-0.3) ' position KSB/AFB Measurement point = edge of control valve Volt: 12 lever on distributor-head end Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: A = KSB adjustment point 1/min: 220 1st speed B = KSB curve point KSB/AFB Volt: 12 valve Timing valve Volt: 12 Shutoff Overflow restriction 0.75 mm - Part No. ..343,..344 electromagnet>Volt: 12 Del. quantity cm3/: 52.00...78.00 > 1000s.: (52.00...78.00) Microswitch Gap A = 0.8...3.0 mm1/min: 350 2nd speed KSB/AFB **Volt: 12** valve Shutoff

M16

electromagnet>Volt: 12

AFB/AFB BOSCH-INJ.-PUMP TEST SPECIFICATIONS Volt: 12 valve Shutoff Note inst. in remarks column electromagnet>Volt: 12 Test scheet : FIA Supply-pump pressure Edition : 08.02.95 Speed 1/min: 1500 Charge press hPa: 1000 Setting value bar: 5.80...6.40 replaces Calibrating oil : ISO-4113 : VE4/9F2100R548 Injection pump KSB/AFB : 0 460 494 349 Volt: 12 Type number valve > Customer Part-No. : Shutoff electromagnet>Volt: 12 Customer-specific information Full-load del. with charge press.: : FIAT-AUTO Customer 1/min: 1500 Speed : M705 VT19.L Charge press. hPa: 1000 Engine Del. quantity cm3/ > 1000s.: 45.50...46.50 KW: 60 Power 1/min: 2100 KSB/AFB Speed Volt: 12 valve TEST BENCH REQUIREMENTS Shutoff electromagnet>Volt: 12 cm3/: 2.5 1000s.: (2.5) Overflow restricti: 1 463 456 344 Dispersion Calibrating-oil return>temp. > °C Full-load del. w/out charge press.: with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 1/min: 600 Del. quantity cm3/ 1000s.: 41.00...42.00 Inlet press., bar: 0.30...0.40 11 KSB/AFB Calibrating nozzle-holder Volt: 12 valve : 1 688 901 022 assembly> Shutoff electromagnet>Volt: 12 Opening | Pressure> bar: 130.00...133.00 Residual-Delivery Setting Speed 1/min: 600 Test inj. tubing : 1 680 750 073 Del. quantity cm3/ 1000s.: 4.00...6.00 Outside diameter : 6.00 KSB/AFB x Wall>thickness : 2.00 Volt: 12 valve > mm: 450 x Length> Shutoff electromagnet Volt: 12 Start of delivery block Piston stroke mm: 1.00 Full-load speed regulation mm: +-0.02(0.04)> Outlet > 1/min: 2300 Speed Charge press hPa: 1000 Injection-pump setting values Del. quantity cm3/ Test specifications in parentheses 1000s.: 31.00...37.00 > KSB/AFB Timing-device travel > Volt: 12 valve Shutoff 1/min: 1500 electromagnet>Volt: 12 Speed Charge press. hPa: 1000 Setting value mm: 5.80...6.20 Start:

M17

	1 Th Annual / 50 7 50 D
Speed 1/min: 100	+ TD travel mm: 4.507.50 B mm: (4.008.00) B
Del. quantity cm3/: 50.0080.00	KSB/AFB
mind> 1000s.: 50.00	- valve > Volt: -
KSB/AFB	+ Shutoff
Valve > Volt: 12	+ electromagnet>Volt: 12
Shutoff	+ 6th speed 1/min: 500
electromagnet>Volt: 12	+ Charge press. hPa: 1000
	+ TD travel mm: 3.204.80 A
Load-dependent start of delivery:	+ > mm: (2.505.50) A
Injqty.dif.measurement:	+ KSB/AFB
Smood Almino AEOO	+ valve > Volt; -
Speed 1/min: 1500 Injqty. cm3/	+ Shutoff + electromagnet>Volt: 12
difference> 1000s.: -10.018.0 #	I etectrollagilet/vott: 12
KSB/AFB	Supply-pump pressure characteristic:
valve > Volt: 12	outpety pump pressure character iscite.
Shutoff	+ 1st speed 1/min: 2100
electromagnet>Volt: 12	+ Charge press. hPa: 1000
TD-travel dif.measurement	- Supply-pump
	+ pressure> bar: 7.508.10
1.Speed 1/min: 1500	+ KSB/AFB
TD-travel	+ valve > Volt: 12
difference> mm: -0.81.0 #	+ Shutoff
KSB/AFB	+ electromagnet>Volt: 12
valve > Volt: 12	+ 2nd speed 1/min: 1500
Shutoff	+ Charge press. hPa: 1000
electromagnet>Volt: 12	+ Supply-pump
	+ pressure> bar: 5.806.40
Inspection-pump test specifications	+ KSB/AFB
Test specifications in parentheses	+ valve > Volt: 12
Timing de des characteristics	+ Shutoff
Timing-device characteristic:	+ electromagnet>Volt: 12
2nd speed 1/min: 2100	+ 3rd speed 1/min: 800 + Charge press. hPa: 1000
2nd speed 1/min: 2100 Charge press hPa: 1000	+ Supply-pump
TD travel mm: 8.609.40	pressure> bar: 3.704.30
> mm: (8.309.70)	+ KSB/AFB
KSB/AFB	+ valve > Volt: 12
valve > Volt: 12	+ Shutoff
Shutoff	+ electromagnet>Volt: 12
electromagnet>Volt: 12	
3rd speed 1/min: 1500	Overlow quantity at overflow valve:
Charge press hPa: 1000	+
TD travel mm: 5.806.20	+ 1st speed 1/min: 600
> mm: (5.406.60)	+ Charge press. hPa: -
KSB/AFB	+ KSB/AFB
valve > Volt: 12	+ valve > Volt: 12
Shutoff	+ Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12
4th speed 1/min: 800	+ Overflow : 75.06119.54
Charge press hPa: 1000	+ quantity> cm3/10s: (75.06119.54)
TD travel mm: 1.702.50	electromagnet>Volt: 12 Overflow : 75.06119.54 quantity> cm3/10s: (75.06119.54) 2nd speed 1/min: 2100 Charge press. hPa: 1000 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Overflow : 97.30180.70
> mm: (1.402.80)	+ Charge press. hPa: 1000
KSB/AFB valve > Volt: 12	+ KSB/AFB
valve > Volt: 12 Shutoff	+ valve > Volt: 12 + Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12
5th speed 1/min: 1000	- etectromagnet/vott: 72 - overflow : 97.30180.70
Charge press. hPa: 1000	quantity> cm3/10s: (97.30180.70)
and 20 hi case that tom	quarterey= clip/ 103+ C/1+30++100+107

	+	> 1000s.: (39.0044.00)
Delivery-quant. and	breakaway char.:	20th speed 1/min: 900
• •	· +	Charge press. hPa: 1000
		KSB/AFB
1nd speed 1/min:	900*	valve > Volt: 12
Charge-air pressure-		Shutoff
point> hPa:	350	electromagnet>Volt: 12
KSB/AFB	I	Del. quantity cm3/: 47.0050.00
valve > Volt:	12	> 1000s.: (46.0051.00)
	1 ²	/ (40.0051.00)
Shutoff	12	
electromagne "Molt:		
Del. quantity cm3/:		_, , , , , , , , , , , , , , , , , , ,
	(44.0049.00)	Electr. shutoff:
3rd speed 1/min:		
Charge press. hPa:	1000	1st speed 1/min: 450
KSB/AFB	+	Charge press. hPa: -
valve > Volt:	12	Del. quantity cm3/: 0.003.00
Shutoff	1	> 1000s.: (0.003.00)
electromagnet>Volt:	12	Shutoff
Del. quantity cm3/:		electromagnet>volt: -
> 1000S.:	(0.007.00)	etetti diiagi ietzvott
		Name and other
4th speed 1/min:	4000	Damper set qty.:
Charge press. hPa:	1000	1 mm
KSB/AFB	†	LFG-setting:
valve > Volt:	12 +	
Shutoff	†	Idle delivery:
electromagnet>Volt:	12 +	
Del. quantity cm3/:	13.0021.00	1st speed 1/min: 450
> 1000s.:	(12.0022.00)	KSB/AFB
5th speed 1/min:	2300	valve > Volt: 12
Charge press. hPa:	1000	Shutoff
KSB/AFB	I	electromagnet Volt: 12
valve > Volt:	12 T	
	T	Del. quantity cm3/: 14.5018.50
Shutoff	42	> 1000s.: (12.5020.50)
electromagnet>Volt:	72 00 77 00	B. 1. 3.15
Del. quantity cm3/: > 1000S.:	31.0037.00	Rest delivery:
> 1000s.:	(29.0039.00)	
9th speed 1/min:	2100 +	1st speed 1/min: 600
Charge press. hPa:	1000 +	KSB/AFB
KSB/AFB	+	valve > Volt: 12
valve > Volt:	12 +	Shutoff
Shutoff	 	electromagnet>Volt: 12
electromagnet>Volt:	12 +	Del. quantity cm3/: 4.006.00
Del. quantity cm3/:	45.0048.00 ±	> 10005.: (3.007.00)
> 1000s.:	(44.0049.00)	2nd speed 1/min: 550
12th speed 1/min:	1500	KSB/AFB
		valve > Volt: 12
Charge press. hPa:	T	
KSB/AFB	42	Shutoff
valve > Volt:	16 +	electromagnet Volt: 12
Shutoff	10 †	Del. quantity cm3/: 5.508.50
electromagnet>Volt:	12	
Del. quantity cm3/:	45.5046.50	Load-dependent start of delivery:
	(44.0048.00)	<pre>Injqty.dif.measurement:</pre>
18th speed 1/min:	600 +	
Charge press. hPa:		1st speed 1/min: 1500
KSB/AFB	+	Injqty. cm3/ : -9.011.0'
valve > Volt:	12 👃	difference> 1000s.: (-9.011.0)'
Shutoff	<u></u>	KSB/AFB
electromagnet>Volt:	12 I	valve > Volt: 12
Del. quantity cm3/:		Shutoff
section districts curst.	T1.0042.00 T	SHULUIT

electromagnet>Volt: 12	+ Del. quantity cm3/: 35.0045.00 - > 1000s.: (35.0045.00)
3rd speed 1/min: 1500	+ > 1000s.: (35.0045.00)
Injqty. cm3/: -10.018.0#	
difference> 1000s.: (-10.018.0)#	+ 4th speed 1/min: 100
KSB/AFB	+ KSB/AFB
valve > Volt: 12	+ valve > Volt: 12
Shutoff	+ Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12
5th speed 1/min: 1500	Del. quantity cm3/: 50.0080.00
Injqty. cm3/: 0.00+3.00*	+ > 1000s.: (50.0080.00)
difference> 1000s.: (0.00+3.00)*	+
KSB/AFB	Shutoff electromagnet:
valve > Volt: 12	
Shutoff	- Cut-in
electromagnet>Volt: 12	→ min voltage : 10.0
	Rated voltage : 12.0
TD-travel dif.measurement:	†
correttore anticipo iniezione (SV):	Mounting and assembly dimensions:
1st speed 1/min: 1500	
TD-travel : -0.81.0 #	- Designation
difference> mm: (-0.81.0) #	+ K mm: 3.23.4
KSB/AFB	KF mm: 5.25.4
valve > Volt: 12	MS mm: 1.01.4
Shutoff -	Ya mm: 37.239.2
electromagnet>Volt: 12	Yb mm: 36.645.4
3rd speed 1/min: 1500	A:
TD-travel : -1.11.7 * difference> mm: (-1.01.8) *	Ajustement Potentiometer:
	Ormali, salas sa
KSB/AFB	Supply voltage
valve > Volt: 12	pot. > volt: 5.00
	1 0000000000000000000000000000000000000
Shutoff -	Output volt
	Output volt pot. > volt: 0.72
Shutoff electromagnet>Volt: 12	pot. > volt: 0.72
Shutoff electromagnet>Volt: 12 SP pressdif.measurement:	Output volt pot. > volt: 0.72 Remarks:
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP):	pot. > volt: 0.72
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500	pot. > volt: 0.72 Remarks:
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump—	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3 '	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3 ' difference> bar: (-0.10.3) '	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle
Shutoff electromagnet>Volt: 12 SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3 ' difference> bar: (-0.10.3) ' KSB/AFB	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3 ' difference> bar: (-0.10.3) ' KSB/AFB valve > Volt: 12	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3 ' difference> bar: (-0.10.3) ' KSB/AFB valve > Volt: 12 Shutoff	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3 ' difference> bar: (-0.10.3) ' KSB/AFB valve > Volt: 12	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end
Shutoff electromagnet>Volt: 12 SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3 ' difference> bar: (-0.10.3) ' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3 ' difference> bar: (-0.10.3) ' KSB/AFB valve > Volt: 12 Shutoff	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3' difference> bar: (-0.10.3)' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery:	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3 ' difference> bar: (-0.10.3) ' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery:	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed
Shutoff electromagnet>Volt: 12 SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3' difference> bar: (-0.10.3)' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1st speed 1/min: 220 KSB/AFB valve > Volt: 12	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control
Shutoff electromagnet>Volt: 12 SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > :-0.10.3' difference> bar: (-0.10.3)' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1st speed 1/min: 220 KSB/AFB	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3 ' difference> bar: (-0.10.3) ' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1st speed 1/min: 220 KSB/AFB valve > Volt: 12 Timing valve Volt: 12 Shutoff	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control
Shutoff electromagnet>Volt: 12 SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3' difference> bar: (-0.10.3)' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1st speed 1/min: 220 KSB/AFB valve > Volt: 12 Timing valve Volt: 12 Shutoff electromagnet>Volt: 12	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor—head end
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3' difference> bar: (-0.10.3)' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1st speed 1/min: 220 KSB/AFB valve > Volt: 12 Timing valve Volt: 12 Shutoff electromagnet>Volt: 12 Shutoff electromagnet>Volt: 12 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 52.0078.00	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor—head end A = KSB adjustment point
Shutoff electromagnet>Volt: 12 SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3' difference> bar: (-0.10.3)' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1st speed 1/min: 220 KSB/AFB valve > Volt: 12 Timing valve Volt: 12 Shutoff electromagnet>Volt: 12	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor—head end
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3' difference> bar: (-0.10.3)' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1st speed 1/min: 220 KSB/AFB valve > Volt: 12 Timing valve Volt: 12 Timing valve Volt: 12 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 52.0078.00 > 1000s.: (52.0078.00)	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor—head end A = KSB adjustment point
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > :-0.10.3' difference> bar: (-0.10.3)' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1st speed 1/min: 220 KSB/AFB valve > Volt: 12 Timing valve Volt: 12 Timing valve Volt: 12 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 52.0078.00 > 1000s.: (52.0078.00) 2nd speed 1/min: 350	pot. > volt: 0.72 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor—head end A = KSB adjustment point
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump— pressure > : -0.10.3 ' difference> bar: (-0.10.3) ' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1st speed 1/min: 220 KSB/AFB valve > Volt: 12 Timing valve Volt: 12 Timing valve Volt: 12 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 52.0078.00 > 1000s.: (52.0078.00) 2nd speed 1/min: 350 KSB/AFB	Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor—head end A = KSB adjustment point B = KSB curve point
Shutoff electromagnet>Volt: 12 SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3 ' difference> bar: (-0.10.3) ' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1st speed 1/min: 220 KSB/AFB valve > Volt: 12 Timing valve Volt: 12 Shutoff electromagnet>Volt: 12 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 52.0078.00 > 1000s.: (52.0078.00) 2nd speed 1/min: 350 KSB/AFB valve > Volt: 12	Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor—head end A = KSB adjustment point B = KSB curve point Overflow restriction 0.75 mm - Part No.
Shutoff electromagnet>Volt: 12 SP press.—dif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3' difference> bar: (-0.10.3)' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1st speed 1/min: 220 KSB/AFB valve > Volt: 12 Timing valve Volt: 12 Timing valve Volt: 12 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 52.0078.00	Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor—head end A = KSB adjustment point B = KSB curve point
Shutoff electromagnet>Volt: 12 SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1500 Supply pump- pressure > : -0.10.3 ' difference> bar: (-0.10.3) ' KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1st speed 1/min: 220 KSB/AFB valve > Volt: 12 Timing valve Volt: 12 Shutoff electromagnet>Volt: 12 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 52.0078.00 > 1000s.: (52.0078.00) 2nd speed 1/min: 350 KSB/AFB valve > Volt: 12	Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor—head end A = KSB adjustment point B = KSB curve point Overflow restriction 0.75 mm - Part No.

valve > Volt: 12 BOSCH-INJ.-PUMP TEST SPECIFICATIONS Shutoff electromagnet>Volt: 12 Note inst. in remarks column Supply-pump pressure : FIA Test scheet : 08.02.95 1/min: 1500 Edition Speed Setting value bar: 5.60...6.20 replaces : ISO-4113 Calibrating oil KSB/AFB Volt: 12 valve > : VE4/9F2300R549 Shutoff Injection pump : 0 460 494 350 electromagnet>Volt: 12 Type number Customer Part-No. : Full-load del. with charge press.: Customer-specific information 1/min: 1500 Speed Del. quantity cm3/ > 1000s.: 33.50...34.50 Customer : FIAT-AUTO : M705 VA 19.L Engine : KSB/AFB > Volt: 12 valve KW: 51 1/min: 2300 Shutoff Power Speed electromagnet>Volt: 12 cm3/: 3.0 Dispersion TEST BENCH REQUIREMENTS 1000s.: (3.0) Overflow restricti: 1 463 456 303 Residual-Delivery Setting Calibrating oil Speed 1/min: 530 return>temp. > °C Del. quantity cm3/ with>thermometer> : 40.00...48.00 1000s.: 1.00...3.00 Electronically> : 42.00...50.00 KSB/AFB Volt: 12 valve > Inlet press., bar: 0.30...0.40 Shutoff electromagnet Volt: 12 Calibrating nozzle-holder : 1 688 901 022 assembly> Full-load speed regulation Opening | Speed 1/min: 2475 Pressure> bar: 130.00...133.00 Del. quantity cm3/ 1000s.: 19.00...25.00 KSB/AFB Test inj. tubing : 1 680 750 073 > Volt: 12 valve **Statoff** Outside diameter : 6.00 x Wall>thickness : 2.00 electromagnet>Volt: 12 mm: 450 x Length> Start: Start of delivery block 1/min: 100 Del. quantity cm3/: 35.00...75.00 Piston stroke mm: 1.00 mind> 1000s.: 35.00 mm: +0.02(0.04)> Outlet > KSB/AFB > Volt: 12 Valve Shutoff Injection-pump setting values Test specifications in parentheses electromagnet>Volt: 12 Timing device travel Load-dependent start of delivery: Inj.-qty.dif.measurement: 1/min: 1500 Speed

1/min: 1500

cm3/

Speed

Inj.-qty.

AFB/AFB

Setting value mm: 5.70...6.10

difference> 1000S.: -9.0017.00# KSB/AFB	+ pressure> bar: 7.408.00 + KSB/AFB
valve > Volt: 12 Shutoff	<pre>+ valve > Volt: 12 + Shutoff</pre>
electromagnet>Volt: 12	+ electromagnet>Volt: 12
TD-travel dif.measurement	- 2nd speed 1/min: 1500 - Supply-pump
1.Speed 1/min: 1500 TD-travel	pressure> bar: 5.606.20
difference> mm: -0.60.8 # KSB/AFB	+ valve > Volt: 12 + Shutoff
valve > Volt: 12	+ electromagnet>Volt: 12
Shutoff	+ 3rd speed 1/min: 600
electromagnet>Volt: 12	Supply-pump pressure> bar: 3.404.00
Inspection-pump test specifications	KSB/AFB
Test specifications in parentheses	+ valve > Volt: 12
	+ Shutoff
Timing-device characteristic:	+ electromagnet>Volt: 12
	+ 4th speed 1/min: 800
2nd speed 1/min: 2300	+ Supply-pump
TD travel mm: 8.409.20	+ pressure> bar: 3.904.50
> mm: (8.109.50)	+ KSB/AFB
KSB/AFB	+ valve > Volt: 12
valve > Volt: 12	+ Shutoff
Shutoff	electromagnet>Volt: 12
electromagnet>Volt: 12	- Coottonagnos voces ve
3rd speed 1/min: 1500	Overlow quantity at overflow valve:
TD travel mm: 5.706.10	T over tow qualitity at over itow valve.
	T 1st speed 1/min: 600
KSB/AFB	+ KSB/AFB
valve > Volt: 12	+ valve > Volt: 12
Shutoff	+ Shutoff
electromagnet>Volt: 12	electromagnet>Volt: 12
4th speed 1/min: 800	+ Overflow : 41.7083.40
TD travel mm: 2.603.40	quantity> cm3/10s: (26.7098.40)
> mm: (2.303.70)	2nd speed 1/min: 2300
KSB/AFB	KSB/AFB
valve > Volt: 12	valve > Volt: 12
Shutoff	Shutoff
electromagnet>Volt: 12	electromagnet>Volt: 12
5th speed 1/min: 1000	Overflow : 55.60139.00
TD travel mm: 4.507.50 B	quantity> cm3/10s: (40.60154.00)
> mm: (4.507.50) B	T qualities (10) 103. (40.00.1.154.50)
KSB/AFB	Delivery-quant. and breakaway char.:
valve > Volt: -	Decivery quarter and breakaway chair.
Shutoff -	
electromagnet>Volt: 12	- 2nd speed 1/min: 2900
6th speed 1/min: 500	+ KSB/AFB
TD travel mm: 3.905.50 A	valve > Volt: 12
> mm: (3.905.50) A	+ Shutoff
KSB/AFB -	electromagnet Volt: 12
valve > Volt: -	Del. quantity cm3/: 0.003.00
Shutoff	> 1000s.: (0.003.00)
electromagnet>Volt: 12	3rd speed 1/min: 2700
COOK SINGEROF FOLLS IL	KSB/AFB
Supply-pump pressure characteristic:	Valve
	Shutoff
1st speed	electromagnet>Volt: 12
Sunnivenimo	L Del quentity cm3/· 1 00 0 00

> 1000s.: (0.0010.00) 5th speed 1/min: 2475	+ 2nd speed 1/min: 350 + KSB/AFB
KSB/AFB valve > Volt: 12	valve > Volt: 12 - Shutoff
Shutoff electromagnet>Volt: 12	electromagnet>Volt: 12 Del. quantity cm3/: 20.0026.00
Del. quantity cm3/: 19.0025.00	+ > 1000s.: -
> 1000s.: (17.0027.00) 9th speed 1/min: 2300 KSB/AFB	High Idle:
valve > Volt: 12 Shutoff	1st speed 1/mi: 500 KSB/AFB
electromagnet>Volt: 12	valve > Volt: 12 Shutoff
Del. quantity cm3/: 31.7034.30 > 1000s.: (30.5035.50)	+ electromagnet>Volt: 12
12th speed 1/min: 1500 KSB/AFB	- Del. quantity cm3/: 15.0017.00 -> 1000s.: (13.0019.00)
valve > Volt: 12 Shutoff	> 1000s.: -
electromagnet>Volt: 12	Rest delivery:
Del. quantity cm3/: 33.5034.50 > 1000s.: (31.5036.50)	+ 1st speed 1/min: 530
15th speed 1/min: 1000	+ KSB/AFB
KSB/AFB	+ valve > Volt: 12
valve > Volt: 12	+ Shutoff
Shutoff electromagnet>Volt: 12	+ electromagnet>Volt: 12 + Del. quantity cm3/: 1.003.00
Del. quantity cm3/: 31.2034.20	1000s.: (0.503.50)
> 1000s.: (30.2035.20)	+
20th speed 1/min: 600	Load-dependent start of delivery:
KSB/AFB valve > Volt: 12	+ Injqty.dif.measurement:
Shutoff	T 1st speed 1/min: 1500
electromagnet>Volt: 12	+ Iniaty. cm3/ : -7.59.5 *
Del. quantity cm3/: 28.5032.50 > 1000s.: (27.5033.50)	+ difference> 1000s.: (-7.59.5) * + KSB/AFB
	+ valve > Volt: 12 + Shutoff
	+ electromagnet>Volt: 12
Electr. shutoff:	- 3rd speed 1/min: 1500 - Injqty. cm3/: -9.017.0#
1st speed 1/min: 450	difference> 1000S.: (-9.017.0)#
Del. quantity cm3/: 0.003.00	+ KSB/AFB
> 1000s.: (0.003.00)	+ valve > Volt: 12
Shutoff	+ Shutoff + electrom@gnet>Volt: 12
electromagnet>volt: -	T etectrollegret/vott. 12
Damper set qty.:	TD-travel dif.measurement: correttore anticipo iniezione (SV):
LFG-setting:	+ 1st speed 1/min: 1500 + TD-travel : -0.60.8 #
Idle delivery:	+ difference> mm: (-0.60.8) # + KSB/AFB
1st speed 1/min: 450 KSB/AFB	+ valve > Volt: 12 + Shutoff
valve > Volt: 12 Shutoff	electromagnet>Volt: 12
electromagnet Volt: 12	+ SP pressdif.measurement:
Del. quantity cm3/: 8.5010.50	+ pompa di mandata (FP):
> 1000s.: (6.5012.50)	+ 1st speed 1/min: 1500

Supply pump-: -0.1...-0.3 * pressure > bar: (-0.1...-0.3) *difference> KSB/AFB valve Volt: 12 Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery: 1/min: 130 1st speed KSB/AFB > Volt: 12 valve Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 45.00...75.00 1000s.: (45.00...75.00) 1/min: 350 2nd speed KSB/AFB > Volt: 12 valve Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 20.00...40.00 > 1000s.: (20.00...40.00) 1/min: 100 4th speed KSB/AFB > Volt: 12 valve Shutoff electromagnet>Volt: 12
Del. quantity cm3/: 35.00...75.00
> 1000s.: (40.00...70.00) Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation mm: 3.2...3.4 mm: 5.3...5.7 K KF MS mm: 1.4...1.6 mm: 37.2...39.2 Ya mm: 41.1...49.5 Yb Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and

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speed-control lever in rated speed
position
Measurement point = edge of control
lever on distributor-head end

A = KSB adjustment point B = KSB curve point

Permissible portiont scatter with stop test, electrical = max. 5.0 ccm/1000 S.

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : OPE : 03.02.95 Edition replaces Calibrating oil : ISO-4113 Injection pump : VE4/9F2250R571 : 0 460 494 353 Type number Customer Part-No. : Customer-specific information Customer : OPEL Engine : 1,7 DT-LC TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating-oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar: 0.30...0.40 Calibrating nozzle-holder : 1 688 901 022 assembly> Openina bar: 127,00...133.00 Pressure> Test inj. tubing : 1 630 750 073 Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450 Start of delivery Prestroke mm: -(from BDC): -Injection-pump setting values Test specifications in parentheses Timing-device travel

1/min: 1500

Volt: 12

Setting value mm: 4.10...4.30

Charge press. hPa: 1000

electromagnet>Volt: 12

KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Full-load del. with charge press.: 1/min: 1200 Charge press. hPa: 1000 Del. quantity cm3/ > 1000S.: 32.80...33.80 KSB/AFB Volt: 12 valve > Shutoff electromagnet>Volt: 12 Dispersion cm3/: 2.5 1000s.: (2.5) Full-load del. w/out charge press.: Speed 1/min: 500 Del. quantity_cm3/ 1000s.: 28.50...33.50 11 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Low-idle speed regulation 1/min: 485 Speed Del. quantity cm3/ 1000s.: 8.00...10.00 > KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 2.5 > 1000s.: (2.5) Residual-Delivery Setting 1/min: 800 Speed Del. quantity cm3/ 1000s.: 3.50...4.50 KSB/AFB Volt: 12 valve > Shutoff electromagnet Volt: 12 Full-load speed regulation 1/min: 2550 Speed Charge press hPa: 1000

Supply-pump pressure

Charge press hPa: 1000

Speed

1/min: 1500

Setting value bar: 6.10...6.70

Speed

AFB/AFB

Shutoff

valve

Del. quantity cm3/	+ Shutoff
> 1000s.: 22.0026.00	+ electromagnet>Volt: 12
KSB/AFB	+ 4th speed 1/min: 1000
valve > Volt: 12	+ Charge press hPa: 1000
Shutoff	+ TD travel mm: 1.402.00
electromagnet>Volt: 12	+ > mm: (1.102.30)
•	+ KSB/AFB
Start:	+ valve > Volt: 12
	+ Shutoff
Speed 1/min: 100	<pre>+ electromagnet>Volt: 12</pre>
Charge press hPa: -	+ 9th speed 1/min: 400
Del. quantity cm3/: 36.0052.00	+ Charge press. hPa: 1000
Del. quantity cm3/: 36.0052.00 mind> 1000s.: 36.00	+ TD travel mm: 0.82.8 A
KSB/AFB	+ > mm: (0.63.0) A
Valve > Volt: 12	+ KSB/AFB
Shutoff	+ valve > Volt: -
electromagnet>Volt: 12	+ Shutoff
	+ electromagnet>Volt: 12
Load-dependent start of delivery:	+ 10th speed 1/min: 800
Injqty.dif.measurement:	Change pages has 1000
	TD travel mm: 2.04.0 B
Speed 1/min: 1000	+ > mm: (1.84.2) B
Charge press hPa: 1000	+ KSB/AFB
Injqty. cm3/	+ valve > Volt: -
difference> 1000S.: -8.0010.00 *	+ Shutoff
KSB/AFB	+ electromagnet>Volt: 12
valve > Volt: 12	1 Cecti diagnet vott. 12
Shutoff	Supply-pump pressure characteristic:
electromagnet>Volt: 12	T supply pump pressure character iscic.
SP press.—dif.measurement	1st speed 1/min: 2250
or press. attimedsurement	Charge press. hPa: 1000
1.Speed 1/min: 1000	+ Supply-pump
Charge press hPa: 1000	
	+ pressure> bar: 8.208.80 + KSB/AFB
Supply pump	T NOD/AFB > Volt: 12
pressure> difference> bar: -0.10.3 *	+ Shutoff
KSB/AFB	
valve > Volt: 12	+ electromagnet>Volt: 12 + 2nd speed 1/min: 1500
Shutoff	+ Charge press. hPa: 1000
electromagnet Volt: 12	+ Supply-pump + pressure> bar: 6.106.70
Topograpian number of considirations	+ pressure> bar: 6.106.70 + KSB/AFB
Inspection-pump test specifications	1
Test specifications in parentheses	+ valve > Volt: 12
Tining do rico she nectoristics	+ Shutoff
Timing-device characteristic:	+ electromagnet>Volt: 12
2nd annual 1/min. 2000	+ 3rd speed 1/min: 1000
2nd speed 1/min: 2250	+ Charge press. hPa: 1000
Charge press hPa: 1000	+ Supply-pump
TD travel mm: 7.408.00	+ pressure> bar: 4.705.30
> mm: (7.108.30)	+ KSB/AFB
KSB/AFB	+ valve > Volt: 12
valve > Volt: 12	+ Shutoff
Shutoff	+ electromagnet>Volt: 12
electromagnet>Volt: 12	T Combon management as an order of the
3rd speed 1/min: 1500	† Overlow quantity at overflow valve:
Charge press hPa: 1000	† 4 h
TD travel mm: 4.104.30	† 1st speed 1/min: 700
> mm: (3.604.80)	+ Charge press. hPa: 1000
KSB/AFB	+ KSB/AFB
valve > Volt: 12	† valve > Volt: 12

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Shutoff	+ Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12
Overflow : 41.7086.10	Del. quantity cm3/: 32.8033.80 > 1000s.: (31.0035.60)
quantity> cm3/10s: (26.70101.10)	+ > 1000s.: (31.0035.60)
2nd speed 1/min: 2250	+ Zuth speed 1/min: /UU
Charge press. hPa: 1000	+ Charge press. hPa: 1000
KSB/AFB	+ KSB/AFB
valve > Volt: 12	+ valve > Volt: 12
Shutoff	+ Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12
Overflow : 55.60139.00	+ Del. quantity cm3/: 30.0033.00
quantity> cm3/10s: (40.60154.00)	+ > 1000s.: (28.5034.50)
	+ 21th speed 1/min: 500
Delivery-quant. and breakaway char.:	+ Charge press. hPa: -
	+ KSB/AFB
	+ valve > Volt: 12
2nd speed 1/min: 2950	+ Shutoff
Charge press. hPa: 1000	+ electromagnet>Volt: 12
KSB/AFB	+ Del. quantity cm3/: 28.50 元 3.50
valve > Volt: 12	+ > 1000s.: (28.0034.00)
Shutoff	+
electromagnet Volt: 12	†
Del. quantity cm3/: 0.004.00	† -, , , , , , , , , , , , , , , , , , ,
> 1000s.: (0.004.00)	† Electr. shutoff:
3rd speed 1/min: 2725	†
Charge press. hPa: 1000	+ 1st speed 1/min: 485
KSB/AFB	+ Charge press. hPa: -
valve > Volt: 12	+ Del. quantity cm3/: 0.003.00
Shutoff	+ > 1000s.: (0.003.00)
electromagnet>Volt: 12	+ Shutoff
Del. quantity cm3/: 4.0010.00	+ electromagnet>volt: -
> 1000s.: -	+ KSB/AFB
5th speed 1/min: 2550	+ valve > Volt: -
Charge press. hPa: 1000	†
KSB/ĀFB	+ Damper set qty.:
valve > Volt: 12	150
Shutoff	+ LFG-setting:
electromagnet>Volt: 12	† - 11
Del. quantity cm3/: 22.0026.00	+ Idle delivery:
> 1000\$.: (20.00,28.00)	1 4-4 4/ 105
9th speed 1/min: 2250	+ 1st speed 1/min: 485
Charge press. hPa: 1000	+ KSB/AFB
KSB/ĀFB valve > Volt: 12	+ valve > Volt: 12
	+ Shutoff
Shutoff	+ electromagnet Volt: 12
electromagnet>Volt: 12 Del. quantity cm3/: 35.2037.80	+ 9el. quantity cm3/: 8.0010.00 + > 1000s.: (6.0012.00)
> 1000S.: (34.2038.80)	
	2nd speed 1/min: 460
10th speed 1/min: 1800	+ KSB/AFB + valve > Volt: 12
Charge press. hPa: 1000 KSB/AFB	1
valve > Volt: 12	+ Shutoff + electromagnet>Volt: 12
Shutoff	
	+ Del. quantity cm3/: 13.5018.50 + > 1000s.: -
electromagnet>Volt: 12 Del. quantity cm3/: 34.7037.70	I ()
> 1000S.: (33.9038.50)	High Idle:
12th speed 1/min: 1200	I mgn race.
Charge press. hPa: 1000	1st speed 1/mi: 540
KSB/AFB	KSB/AFB
valve > Volt: 12	+ valve > Volt: 12

Shutoff +	
electromagnet>Volt: 12	1st speed 1/min: 1000
Del. quantity cm3/: 8.0010.00	Charge press. hPa: 1000
> 1000s.: (5.5012.50)	KSB/AFB
1000011 1313011111111111111111111111111	
Post delivery	valve > Volt: 12
Rest delivery:	Shutoff
†	electromagnet>Volt: 12
1st speed 1/min: 800 +	Del. quantity cm3/: 14.0016.00
KSB/AFB +	> 1000s.; (12.5017.50)
valve > Volt: 12	
Shutoff	Automatic starting fuel delivery:
alastroma mativalta 12	Automatic starting fuet detivery.
electromagnet>Volt: 12 Del. quantity cm3/: 3.504.50	4
Del. quantity cm3/: 3.504.50 +	1st speed 1/min: 250
> 1000s.: (2.006.00) +	KSB/AFB
+	valve > Volt: 12
Load-dependent start of delivery:	Shutoff
Inj.—qty.dif.measurement:	electromagnet>Volt: 12
Till-qty.ullimeasuralient.	20 00 50 00
4 1 4/1 4000	Del. quantity cm3/: 40.0050.00
1st speed 1/min: 1000 +	> 1000s.: -
Charge press. hPa: 1000	
Injqty. cm3/ : -7.015.0"	2nd speed 1/min: 400
difference> 1000s.: -	KSB/AFB
KSB/AFB	valve > Volt: 12
	· - · · · · · · · · · · · · · · · · · ·
valve > Volt: 12	Shutoff
Shutoff	electromagnet>Volt: 12
electromagnet>Volt: 12	Del. quantity cm3/: 27.0037.00
2nd speed 1/min: 1000 +	> 1000s.: -
Charge press. hPa: 1000	
Injqty. cm3/: 4.06.0 'Z	3rd speed 1/min: 100
difference> 1000S.: -	KSB/AFB
KSB/AFB +	valve > Volt: 12
valve > Volt: 12 +	Shutoff
Shutoff +	electromagnet>Volt: 12
electromagnet Volt: 12	Del. quantity cm3/: 47.0047.00
TD-travel dif.measurement:	4th speed 1/min: 100
correttore anticipo iniezione (SV):	KSB/AFB
1st speed 1/min: 1000 +	valve > Volt: 12
Charge press. hPa: 1000	Shutoff
TD-travel : -0.50.7 "	electromagnet>Volt: 12
difference> mm: - +	Del. quantity cm3/: 36.0052.00
KSB/AFB	> 1000s.: -
valve > Volt: 12	1000011
Shutoff	Shutoff electromagnet:
	Shutoff etectromagnet:
electromagnet>Volt: 12 +	- · •
2nd speed 1/min: 1000 +	Cut-in
Charge press. hPa: 1000 +	>min voltage : 10.0
TD-travel : -0.91.5 '	Rated voltage : 12.0
difference> mm: -	
KSB/AFB	Mounting and assembly dimensions:
	ribulte ing and assembly difficults to its.
valve > Volt: 12	
Shutoff	Designation
electromagnet>Volt: 12	K mm: 3.23.4
4	KF mm: 5.25.6
Part-load del.at 3rd injqty.	MS mm: 0.71.1
terza fermo della portata	Ya mm: 24.226.2
	Yb mm: 53.764.3
stop (EGR set)	Yb mm: 53.764.3
scarico) (ARF)	
gaz d'échappement-ARF)	
	Remarks:
Spacing mm: 12.0	Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

Z = Absolute delivery

Pump in stepped LDA

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

BOSCH-INJ.-PUMP TEST SPECIFICATIONS

Note inst. in remarks column

: VWW Test scheet

Edition : 07.02.95

replaces

Calibrating oil : ISO-4113

: VE4/9F2300R599 Injection pump : 0 460 494 366 Type number

Customer Part-No. :

Customer-specific information

Customer

: 1,9 L UD B4 Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 000

Opening

bar: 147.00...150.00 Pressure>

Test ini. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery block Piston stroke mm: 0.8

mm: +-0.02(0.05)

Outlet > : A

Injection pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1250 Speed Charge press. hPa: 750

Setting value mm: 4.30...4.50

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1250

Charge press hPa: 750 Setting value bar: 5.40...6.00

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

1/min: 1250 Speed Charge press. hPa: 750

Del. quantity cm3/

1000s.: 50.00...51.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.5 1000s.: (3.0)

Residual-Delivery Setting

1/min: 550 Speed

Del. quantity cm3/

1000s.: 7.00...8.00 >

Shutoff

electromagnet Volt: 12

Full-load speed regulation

1/min: 2600 Speed hPa: 750 Charge press

Del. quantity cm3/

1000s.: 9.00...13.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

1/min: 1250 Speed

Inj.-qty. cm3/

difference> 1000\$.: -8.00...-12.00#

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

1.Speed 1/min: 1250

TD-travel

mm: -1.9...-2.1 # difference>

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

1/min: 2100 hPa: 750 2nd speed Charge press

mm: 8.00...8.60 TD travel

> mm: (7.509.10)	<pre>Delivery-quant. and breakaway char.:</pre>
Shutoff	+
electromagnet>Volt: 12	+
3rd speed 1/min: 1250	+ 2nd speed 1/min: 2750
Charge press hPa: 750	- Charge press. hPa: 750
TD travel mm: 4.304.50	+ Shutoff
> mm: (3.605.20)	+ electromagnet Volt: 12
Shutoff	+ Del. quantity cm3/: 0.003.00
electromagnet>Volt: 12	+ > 1000S.: (0.003.00)
4th speed 1/min: 750	+ 5th speed 1/min: 2600
Charge press hPa: 750	Charge press. hPa: 750
TD travel mm: 1.502.10	+ Shutoff
TD travel mm: 1.502.10 > mm: (1.002.60)	
Shutoff	electromagnet>Volt: 12
	+ Del. quantity cm3/: 9.0013.00
electromagnet>Volt: 12	+ > 1000s.: (7.0015.00)
5th speed 1/min: 1250	+ 8th speed 1/min: 2400
Charge press. hPa: -	+ Charge press. hPa: 750
TD travel mm: 0.000.60	+ Shutoff
> mm: (0.000.60)	+ electromagnet>Volt: 12
KSB/AFB	+ Del. quantity cm3/: 32.5042.50
valve > Volt: ALFB	+ > 1000s.: (31.5043.50)
Shutoff	+ 9th speed 1/min: 2100
electromagnet>Volt: 12	+ Charge press. hPa: 750
	+ Shutoff
Supply-pump pressure characteristic:	+ electromagnet>Volt: 12
	+ Del. quantity cm3/: 42.0044.00
1st speed 1/min: 750	+ > 1000s.: (40.8045.20)
Charge press. hPa: 750	+ 12th speed 1/min: 1250
Supply-pump	+ Charge press. hPa: 750
pressure> bar: 4.304.90	+ Shutoff
Shutoff	+ electromagnet>Volt: 12
electromagnet>Volt: 12	Del. quantity cm3/: 50.0051.00
2nd speed 1/min: 1250	+ > 1000s.: (48.3052.70)
Chargo proce hos 750	7 21th annual 1/min: 450
Charge press. hPa: 750	+ 21th speed 1/min: 450
Supply-pump pressure> bar: 5.406.00	Charge press. hPa: -
	+ Shutoff
Shutoff	+ electromagnet>Volt: 12
electromagnet>Volt: 12	+ Del. quantity cm3/: 37.2043.20
3rd speed 1/min: 2100	+ > 1000s.: (34.7045.70)
Charge press. hPa: 750	†
Supply-pump	+
pressure> bar: 7.408.00	+
Shutoff	+ Electa. shutoff:
electromagnet>Volt: 12	†
	+ 1st speed 1/min: 450
Overlow quantity at overflow valve:	+ Del. quantity cm3/: 0.003.00
	+ > 1000s.: (0.003.00)
1st speed 1/min: 1250	+ Shutoff
Charge press. hPa: 750	+ electromagnet>volt: -
Shutoff	+
electromagnet>Volt: 12	+ Damper set qty.:
Overflow : 41.7086.18	+
quantity> cm3/10s: (29.1998.69)	+ LFG-setting:
2nd speed 1/min: 2100	+
Charge press. hPa: 750	Idle delivery:
Shutoff	
electromagnet>Volt: 12	1st speed 1/min: 450
Overflow : 55.60139.90	Shutoff
quantity> cm3/10s: (41.70152.90)	+ electromagnet Volt: 12
quantity UID/105: (41./0126.70)	
	+ Del. quantity cm3/: 16.0018.00

> 1000s.: (13.0021.00) +	Shutoff
Dispersion cm3/: 2.0	electromagnet>Volt: 12
> 1000s.: (3.0)	2nd speed 1/min: 1250
/ 10005.: (3.0)	
t	Supply pump-
High Idle:	pressure > : -1.01.4 *
<u> </u>	difference bar: $(-0.81.4) *$
1st speed 1/mi: 550 +	
Shutoff	Part-load del.at 3rd injqty.
electromagnet>Volt: 12	
Polymorphisms 27, 4, 00, 49,00	terza fermo della portata
Del. quantity cm3/: 16.0018.00	stop (EGR set)
> 1000s.: (13.0021.00) +	scarico) (ARF)
	gaz d'échappement-ARF)
Rest delivery:	Spacing mm: 12.0
	upating
1st speed 1/min: 550 +	1st speed 1/min: 1000
Shutoff	Charge press. hPa: 750
electromagnet>Volt: 12	Shutoff
Del. quantity cm3/: 7.008.00 +	electromagnet>Vclt: 12
> 1000s.: (5.509.50) +	Del. quantity cm3/: 34.0036.00
	> 1000s.: (32.0038.00)
Load-dependent start of delivery:	1000011 (0210011190100)
	Automobile etempine fivel delicemin
Injqty.dif.measurement:	Automatic starting fuel delivery:
†	4
1st speed 1/min: 1250 +	1st speed 1/min: 180
Injqty. cm3/ : -7.011.0# +	Shutoff
difference> 1000s.: (-5.013.0)# +	electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 35.0055.00
	> 1000s.: (35.0055.00)
electromagnet>Volt: 12	/ 10005.: (35.0035.00)
2nd speed 1/min: 1250 +	4. 1. 4. 4. 20.
3rd speed 1/min: 1250 +	2nd speed 1/min: 380
Injqty. $cm3/: -4.56.5$ +	Shutoff
difference> 1000S.: (-4.56.5)	electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 31.0051.00
	> 1000s.: (31.0051.00)
electromagnet>Volt: 12	/ 10005.: (51.0051.00)
4th speed 1/min: 1250 5th speed 1/min: 1250 Injqty. cm3/: 0.003.00 *	AT: 1 A A A A A A A A A A A A A A A A A A
5th speed 1/min: 1250 +	3rd speed 1/min: 100
Injqty. cm3/: $0.003.00 *$	Shutoff
difference> 1000s.: (0.003.00) * +	electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 37.0043.00
electromagnet Valt 12	* ** ** ** ** ** ** ** ** ** ** ** ** *
electromagnet>Volt: 12	> (32.5047.50)
TD-travel dif.measurement:	Shutoff electromagnet:
correttore anticipo iniezione (SV):	
1st speed 1/min: 1250 +	Cut-in
TD-travel : -1.92.1 # +	>min voltage : 10.0
	ZIGG A 10.0
difference> mm· (-1.9, -2.1) # +	
difference> mm: (-1.92.1) #	Rated voltage : 12.0
Shutoff	Rated voltage : 12.0
Shutoff electromagnet>Volt: 12	
Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1250	Rated voltage : 12.0 Mounting and assembly dimensions:
Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1250 TD-travel : -2.52.9 *	Rated voltage : 12.0 Mounting and assembly dimensions: Designation
Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1250	Rated voltage : 12.0 Mounting and assembly dimensions:
Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1250 TD-travel : -2.52.9 * difference> mm: (-2.13.3) *	Rated voltage : 12.0 Mounting and assembly dimensions: Designation K mm: 3.63.8
Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1250 TD-travel : -2.52.9 * difference> mm: (-2.13.3) * Shutoff	Rated voltage : 12.0 Mounting and assembly dimensions: Designation K mm: 3.63.8 KF mm: KOT
Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1250 TD-travel : -2.52.9 * difference> mm: (-2.13.3) *	Rated voltage : 12.0 Mounting and assembly dimensions: Designation K mm: 3.63.8 KF mm: KOT MS mm: 1.01.4
Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1250 TD-travel : -2.52.9 * difference> mm: (-2.13.3) * Shutoff electromagnet>Volt: 12	Rated voltage : 12.0 Mounting and assembly dimensions: Designation K mm: 3.63.8 KF mm: KOT MS mm: 1.01.4 Ya mm: 37.641.6
Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1250 TD-travel : -2.52.9 * difference> mm: (-2.13.3) * Shutoff electromagnet>Volt: 12 SP pressdif.measurement:	Rated voltage : 12.0 Mounting and assembly dimensions: Designation K mm: 3.63.8 KF mm: KOT MS mm: 1.01.4
Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1250 TD-travel : -2.52.9 * difference> mm: (-2.13.3) * Shutoff electromagnet>Volt: 12 SP pressdif.measurement: pompa di mandata (FP):	Mounting and assembly dimensions: Designation K mm: 3.63.8 KF mm: KOT MS mm: 1.01.4 Ya mm: 37.641.6 Yb mm: 50.463.3
Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1250 TD-travel : -2.52.9 * difference> mm: (-2.13.3) * Shutoff electromagnet>Volt: 12 SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250	Rated voltage : 12.0 Mounting and assembly dimensions: Designation K mm: 3.63.8 KF mm: KOT MS mm: 1.01.4 Ya mm: 37.641.6
Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1250 TD-travel : -2.52.9 * difference> mm: (-2.13.3) * Shutoff electromagnet>Volt: 12 SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250	Mounting and assembly dimensions: Designation K mm: 3.63.8 KF mm: KOT MS mm: 1.01.4 Ya mm: 37.641.6 Yb mm: 50.463.3
Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1250 TD-travel : -2.52.9 * difference> mm: (-2.13.3) * Shutoff electromagnet>Volt: 12 SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 Supply pump-	Mounting and assembly dimensions: Designation K mm: 3.63.8 KF mm: KOT MS mm: 1.01.4 Ya mm: 37.641.6 Yb mm: 50.463.3
Shutoff electromagnet>Volt: 12 3rd speed 1/min: 1250 TD-travel : -2.52.9 * difference> mm: (-2.13.3) * Shutoff electromagnet>Volt: 12 SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250	Mounting and assembly dimensions: Designation K mm: 3.63.8 KF mm: KOT MS mm: 1.01.4 Ya mm: 37.641.6 Yb mm: 50.463.3

speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Pump in stepped LDA

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

BOSCH-INJ.-PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test scheet : VWW

Edition : 07.02.95

replaces

Calibrating oil : ISO-4113

: VE4/9F2200R603 Injection pump Type number : 0 460 494 368

Customer Part-No. :

Customer-specific information

Customer

Engine : 1.9 L UD MVEG 2

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating oil return>temp. > °C

with>thermometer>: 40.00...48.00 Electronically>: 42.00...50.50

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 111

Opening |

bar: 147.00...150.00 Pressure>

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00

x Length> mm: 450

Start of delivery block Piston stroke mm: 0.8

mm: +0.02(0.05)

Outlet >

Injection pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1250 Speed Charge press. hPa: 750

Setting value mm: 5.30...5.70

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1250 Charge press hPa: 750

Setting value bar: 5.50...6.10

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

1/min: 1250 Speed Charge press. hPa: 750

Del. quantity cm3/ > 1000s.: 46.00...47.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.5 1000s.: (3.0)

Residual-Delivery Setting

1/min: 550 Speed

Del. quantity cm3/

1000s.: 7.50...8.50

Shutoff

electromagnet Volt: 12

Full-load speed regulation

Speed 1/min: 2525 Charge press hPa: 750

Del. quantity cm3/

1000s.: 18.00...22.00

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

2nd speed 1/min: 2000 hPa: 750 Charge press

mm: 8.20...9.00 TD travel mm: (7,80,..9,40)

Shutoff

electromagnet>Volt: 12 1/min: 1250 3rd speed

Charge press hPa: 750

mm: 5.30...5.70 TD travel mm: (4.70...6.30)

Shutoff

electromagnet>Volt: 12 4th speed 1/min: 750 hPa: 750 Charge press

mm: 3.00...3.80 TD travel mm: (2.60...4.20) >

Shutoff

electromagnet>Volt: 12 1/min: 2000 5th speed

Charge press. hPa:	750	· Charge press. hPa: 750
	0.401.20	- Shutöff
> mn:	- ALFB +	electromagnet>Volt: 12
KSB/AFB	4	- Del. quantity cm3/: 29.5039.50
<pre>valve > Volt:</pre>	12 1	> 1000s.: (28.5040.50)
Shutoff	1	- 9th speed 1/min: 2100
electromagnet>Volt:	12	- Charge press. hPa: 750
	·- 1	- Shutoff
Supply-pump pressure	characteristic:	- electromagnet>Volt: 12
cappe, bank breezere	1	Del. quantity cm3/: 45.2047.20
1st speed 1/min:	750	- > 1000s.: (44.0048.40)
Charge press. hPa:		- 12th speed 1/min: 1250
Supply-pump	I	Charge press. hPa: 750
pressure> bar:	4.004.60	Shutoff
Shutoff	T.004.00	electromagnet>Volt: 12
electromagnet>Volt:	12 T	Pol graphity m7/1 /6 00 /7 00
2nd speed 1/min:	1250	Del. quantity cm3/: 46.0047.00 > 1000s.: (44.3048.70)
		> 1000\$.: (44.5048.70)
Charge press. hPa:	750 †	21th speed 1/min: 450
Supply-pump	5 50 (40	Charge press. hPa: -
	5.506.10	Shutoff
Shutoff	. . †	electromagnet>Volt: 12
electromagnet>Volt:	12 +	Del. quantity cm3/: 41.7047.70
3rd speed 1/min:		> 1000s.: (39.2050.20)
Charge press. hPa:	750 +	•
Supply-pump	+	•
pressure> bar:	7.708.30 +	•
Shutoff	+	Electr. shutoff:
electromagnet>Volt:	12 +	
•	+	1st speed 1/min: 450
Overlow quantity at a	overflow valve: \bot	Del. quantity cm3/: 0.003.00
	1	> 1000s.: (0.003.00)
1st speed 1/min:	1250 👃	Shutoff
Charge press. hPa:	750 +	electromagnet>volt: -
Shutoff		,
electromagnet>Volt:	12	Damper set qty.:
Overflow :	41.7086.18	
quantity> cm3/10s:	(29.1998.69)	LFG-setting:
2nd speed 1/min:		
Charge press. hPa:		Idle delivery:
Shutoff	I	aute detivery.
electromagnet>Volt:	12 I	1st speed 1/min: 450
Overflow : !	55.60139.90 I	Shutoff
quantity> cm3/10s:		electromagnet Volt: 12
qualitity old tos.	T	Del. quantity cm3/: 21.0023.00
Dalayamanandi and I	hnookayay chan . T	> 1000s.: (18.0026.00)
Delivery-quant. and I	oreakaway char.:	/ 10005.: (10.0020.00)
	†	(12 mb - Yal) m.
2-4 4 /	7750	High Idle:
2nd speed 1/min:		4.1
Charge press. hPa:	^{/50} †	1st speed 1/mi: 550
Shutoff	<u> </u>	Shutoff
electromagnet Volt:		electromagnet>Volt: 12
Del. quantity cm3/: (Del. quantity cm3/: 17.0019.00
	(0.003.00)	> 1000s.: (14.0022.00)
5th speed 1/min: 3		
Charge press. hPa:	750 ∔	Rest delivery:
Shutoff	+	·
electromagnet>Volt: '	12 🗼	1st speed 1/min: 550
Del. quantity cm3/:	18.0022.00	Shutoff
> 1000s.: ((16.0024.00)	electromagnet>Volt: 12
8th speed 1/min: 2		Del. quantity cm3/: 7.508.50
•	•	•

1000s.: (6.00...10.00)

Automatic starting fuel delivery:

1st speed 1/min: 180

Shutoff

electromagnet>Volt: 12
Del. quantity cm3/: 35.00...55.00
> 1000s.: (35.00...55.00)

1/min: 380 2nd speed

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 31.00...51.00 1000s.: (31.00...51.00)

1/min: 100 3rd speed

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 40.00...46.00 1000s.: (35.50...50.50)

Shutoff electromagnet:

Cut-in

: 10.0 >min voltage : 12.0 Rated voltage

Mounting and assembly dimensions:

Designation

mm: 3.6...3.8 mm: KOT KF mm: 1.0...1.4 MS mm: 36.0...40.0 Ya Yb mm: 48.6...58.4

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control Lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor head end

Pump in stepped LDA

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

BOSCH-INJ.-PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test scheet : VWW

: 08.02.95 Edition

replaces

: ISO-4113 Calibrating oil

Injection pump : VE4/9F2200R604 Type number : 0 460 494 369

Customer Part-No. :

Customer-specific information

Customer

: 1,9 L UD MVEG 2 Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer>: 40.00...48.00 Electronically> : 42.00...50.50

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 111 assembly>

Opening

bar: 147.00...150.00 Pressure>

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 450 x Length>

Start of delivery block Piston stroke mm: 0.8

mm: +0.02(0.05)

Outlet >

Injection pump setting values Test specifications in parentheses

Timing device travel

Speed 1/min: 1250 Charge press. hPa: 750

Setting value mm: 5.30...5.70

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1250 Charge press hPa: 750

Setting value bar: 5.50...6.10

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

1/min: 1250 Speed Charge press. hPa: 750

Del. quantity cm3/ > 1000s.: 46.00...47.00

Shutoff

electromagnet>Volt: 12 cm3/: 2.5 Dispersion 1000s.: (3.0)

Residual-Delivery Setting

Speed 1/min: 550

Del. quantity cm3/

1000s.: 7.50...8.50

Shutoff

electromagnet Volt: 12

Full-load speed regulation

Speed 1/min: 2525 hPa: 750 Charge press

Del. quantity cm3/

1000s.: 18.00...22.00

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

1/min: 2000 2nd speed hPa: 750 Charge press

mm: 8.20...9.00 TD travel > mm: (7.80...9.40)

Shutoff

electromagnet>Volt: 12 1/min: 1250 3rd speed Charge press hPa: 750

mm: 5.30...5.70 TD travel mm: (4.70...6.30)

Shutoff

electromagnet>Volt: 12 1/min: 750 hPa: 750 mm: 3.00...3.80 4th speed Charge press

TD travel mm: (2.60...4.20)

Shutoff

electromagnet>Volt: 12 5th speed 1/min: 2000

Charge press. hPa: 750 Charge press. hPa: 750 mm: 0.40...1.20 Shutoff TD travel mm: -ALFB electromagnet>Volt: 12 Del. quantity cm3/: 29.50...39.50 > 1000s.: (28.50...40.50) 9th speed 1/min: 2100 KSB/AFB > Volt: 12 valve Shutoff Charge press. hPa: 750 Shutoff electromagnet>Volt: 12 Supply-pump pressure characteristic: electromagnet>Volt: 12 Del. quantity cm3/: 45.20...47.20 1st speed 1/min: 750 Charge press. hPa: 750 1000s.: (44.00...48.40) 12th speed 1/min: 1250 Charge press. hPa: 750 Shutoff Supply-pump bar: 4.00...4.60 pressure> electromagnet>Volt: 12 Del. quantity cm3/: 46.00...47.00 > 1000s.: (44.30...48.70) Shutoff electromagnet>Volt: 12 2nd speed 1/min: 1250 Charge press. hPa: 750 1/min: 450 21th speed Supply-pump Charge press. hPa: pressure> bar: 5.50...6.10 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 41.70...47.70 > 1000s.: (39.20...50.20) Shutoff electromagnet>Volt: 12 3rd speed 1/min: 2000 Charge press. hPa: 750 Supply-pump bar: 7.70...8.30 pressure> Electr. shutoff: Shutoff electromagnet>Volt: 12 1st speed 1/min: 450 Del. quantity cm3/: 0.00...3.00 > 1000S.: (0.00...3.00) Overlow quantity at overflow valve: 1/min: 1250 Shutoff 1st speed Charge press. hPa: 750 electromagnet>volt: -Shutoff electromagnet>Volt: 12 Damper set qty.: : 41.70...86.18 quantity> cm3/10s: (29.19...98.69) LFG-setting: 1/min: 2100 2nd speed Charge press. hPa: 750 Idle delivery: Shutoff electromagnet>Volt: 12 1/min: 450 1st speed : 55.60...139.90 Shutoff electromagnet Volt: 12 Del. quantity cm3/: 21.00...23.00 quantity> cm3/10s: (41.70...152.90) 1000s.: (18.00...26.00) Delivery-quant. and breakaway char.: High Idle: 1/min: 2750 2nd speed Charge press. hPa: 750 Shutoff 1/mi: 500 1st speed Shutoff electromagnet Volt: 12 Del. quantity cm3/: 0.00...3.00 electromagnet>Volt: 12 Del. quantity cm3/: 17.00...19.00 1000s.: (0.00...3.00) 1000s.: (14.00...22.00) 1/min: 2525 5th speed Charge press. hPa: 750 Shutoff Rest delivery: electromagnet>Volt: 12
Del. quantity cm3/: 18.00...22.00
> 1000S.: (16.00...24.00)
8th speed 1/min: 2400 1/min: 550 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 7.50...8.50

1000s.: (6.00...10.00)

Automatic starting fuel delivery:

1/min: 180 1st speed

Shutoff

electromagnet>Volt: 12
Del. quantity cm3/: 35.00...55.00
> 1000s.: (35.00...55.00)

1/min: 380 2nd speed

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 31.00...51.00 > 1000s.: (31.00...51.00)

3rd speed 1/min: 100

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 40.00...46.00 > 1000s.: (35.50...50.50)

Shutoff electromagnet:

Cut-in

: 10.0 >min voltage Rated voltage : 12.0

Mounting and assembly dimensions:

Designation

mm: 3.6...3.8 mm: KOT KF

mm: 1.0...1.4 MS mm: 36.0...40.0 Υa mm: 48.6...58.4 Yb

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position

Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position

Measurement point = edge of control lever on distributor-head end

Pump in stepped LDA

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Supply-pump pressure Note inst. in remarks column 1/min: 1500 Speed Charge press hPa: 1000 Setting value bar: 6.10...6.70 Test scheet : OPE Edition : 03.02.95 KSB/AFB valve > Volt: 12 replaces Shutoff Calibrating oil : ISO-4113 electromagnet>Volt: 12 Injection pump : VE4/9F2250R571-1 Type number : 0 460 494 372 Full-load del. with charge press.: Customer Part-No. : 1/min: 1200 Charge press. hPa: 1000 Del. quantity cm3/ > 1000s.: 32.80...33.80 Customer-specific information Customer : OPFI KSB/AFB Engine : 1,7 DT-LC valve Volt: 12 Shutoff TEST BENCH REQUIREMENTS electromagnet>Volt: 12 Dispersion cm3/: 2.5 Overflow restricti: 1 463 456 303 1000s.: (2.5) Calibrating-oil Full-load del. w/out charge press.: return>temp. > °C with>thermometer>: 40.00...48.00 1/min: 500 Speed Electronically> : 42.00...50.00 Del. quantity cm3/ 1000s.: 28.50...33.50 Inlet press., bar: 0.30...0.40 KSB/AFB > Volt: 12 valve Calibrating nozzle-holder Shutoff : 1 688 901 022 assembly> electromagnet>Volt: 12 Low-idle speed regulation Opening bar: 127.00...133.00 Pressure> 1/min: 485 Speed Del. quantity cm3/ 1000s.: 8.00...10.00 Test inj. tubing : 1 680 750 073 > KSB/AFB Outside diameter : 6.00 > Volt: 12 valve x Wall>thickness : 2.00 Shutoff mm: 450 x Length> electromagnet>Volt: 12 Del. quantity cm3/: 2.5 Start of delivery 1000s.: (2.5) Prestroke mm: -> (from BDC): -Residual-Delivery Setting Injection-pump setting values 1/min: 800 Speed Test specifications in parentheses Del. quantity cm3/ 1000s.: 3.50...4.50 Timing-device travel KSB/AFB valve > Volt: 12 1/min: 1500 Shutoff Speed Charge press. hPa: 1000 electromagnet Volt: 12 Setting value mm: 4.10...4.30 AFB/AFB Full-load speed regulation valve > Volt: 12 Shutoff 1/min: 2550

Charge press hPa: 1000

electromagnet>Volt: 12

Del. quantity cm3/	→ Shutoff
> 1000s.: 22.0026.00	+ electromagnet>Volt: 12
KSB/AFB	+ 4th speed 1/min: 1000
valve > Volt: 12	+ Charge press hPa: 1000
Shutoff	+ TD travel mm: 1.402.00
electromagnet>Volt: 12	+ > mm: (1.102.30)
Start.	+ KSB/AFB + valve > Volt: 12
Start:	+ Shutoff
Speed 1/min: 100	electromagnet>Volt: 12
Charge press hPa: -	9th speed 1/min: 400
Del. quantity cm3/: 36.0052.00	Charge press. hPa: 1000
Del. quantity cm3/: 36.0052.00 mind> 1000s.: 36.00	+ TD travel mm: 0.82.8 A
KSB/AFB	+ > mm: (0.63.0) A
Valve > Volt: 12	+ KSB/AFB
Shutoff	+ valve > Volt: -
electromagnet>Volt: 12	+ Shutoff
	+ electromagnet>Volt: 12
Load-dependent start of delivery:	+ 10th speed 1/min: 800
Injqty.dif.measurement:	+ Charge press. hPa: 1000
	+ TD travel, mm: 2.04.0 B
Speed 1/min: 1000	+ > mm: (1.84.2) B
Charge press hPa: 1000	+ KSB/AFB
Inj.—qty. cm3/	+ valve > Volt: -
difference> 1000S.: -8.0010.00 * KSB/AFB	+ Shutoff
valve > Volt: 12	+ electromagnet>Volt: 12
Shutoff	T Simply-num progrum characteristics
electromagnet>Volt: 12	Supply-pump pressure characteristic:
SP pressdif.measurement	1st speed 1/min: 2250
or press. arr. measurement	Charge press. hPa: 1000
1.Speed 1/min: 1000	+ Supply-pump
Charge press hPa: 1000	pressure> bar: 8.208.80
Supply pump	KSB/AFB
pressure>	+ valve > Volt: 12
difference> bar: -0.10.3 *	+ Shutoff
KSB/AFB	+ electromagnet>Volt: 12
valve > Volt: 12	+ 2nd speed 1/min: 1500
Shutoff	+ Charge press. hPa: 1000
electromagnet Volt: 12	+ Supply-pump
	+ pressure> bar: 6.106.70
Inspection-pump test specifications	+ KSB/AFB
Test specifications in parentheses	+ valve > Volt: 12
	+ Shutoff
Timing device characteristic:	+ electromagnet>Volt: 12
2.1	+ 3rd speed 1/min: 1000
2nd speed 1/min: 2250	+ Charge press. hPa: 1000
Charge press hPa: 1000	+ Supply-pump
TD travel mm: 7.408.00	+ pressure> bar: 4.705.30
> mm: (7.108.30)	+ KSB/AFB
KSB/AFB	+ valve > Volt: 12
valve > Volt: 12 Shutoff	Shutoff
electromagnet>Volt: 12	electromagnet>Volt: 12
3rd speed 1/min: 1500	T Overlow quantity at overflow valve:
Charge press hPa: 1000	T Over tow quarterly at over thow valve.
TD travel mm: 4.104.30	1 1st speed 1/min: 700
> mm: (3.604.80)	Charge press. hPa: 1000
KSB/AFB	KSB/AFB
valve > Volt: 12	+ valve > Volt: 12

Shutoff	+ Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12
Overflow : 41.7086.10	+ Del. quantity cm3/: 32.8033.80
quantity> cm3/10s: (26.70101.10)	+ > 1000s.: (31.0035.60)
2nd speed 1/min: 2250	+ 20th speed 1/min: 700
Charge press. hPa: 1000	+ Charge press. hPa: 1000
KSB/AFB	+ KSB/AFB
valve > Volt: 12	
Shutoff	+ valve > Volt: 12 + Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12
Overflow : 55.60139.00	Del. quantity cm3/: 30.0033.00
quantity> cm3/10s: (40.60154.00)	1000s.: (28.5034.50)
quantity> 010/105: (40.00154.00)	
	+ 21th speed 1/min: 500
Delivery-quant. and breakaway char.:	+ Charge press. hPa: -
	+ KSB/AFB
	+ valve > Volt: 12
2nd speed 1/min: 2950	+ Shutoff
Charge press. hPa: 1000	+ electromagnet>Volt: 12
KSB/AFB	+ Del. quantity cm3/: 28.5033.50
valve > Volt: 12	+ > 1000s.: (28.0034.00)
Shutoff	+
electromagnet Volt: 12	1
Del. quantity cm3/: 0.004.00	1
> 1000s.: (0.004.00)	+ Electr. shutoff:
3rd speed 1/min: 2725	1 Ecoci. Sincoli.
Charge press. hPa: 1000	1st speed 1/min: 485
KSB/AFB	
NOD/AFD	Charge press. hPa: -
valve > Volt: 12	+ Del. quantity cm3/: 0.003.00
Shutoff	+ > 1000s.: (0.003.00)
electromagnet>Volt: 12	+ Shutoff
Del. quantity cm3/: 4.0010.00	+ electromagnet>volt: -
> 1000s.: -	+ KSB/AFB
5th speed 1/min: 2550	+ valve > Volt: -
Charge press. hPa: 1000	+
KSB/AFB	+ Damper set qty.:
valve > Volt: 12	+
Shutoff	+ LFG-setting:
electromagnet>Volt: 12	+
Del. quantity cm3/: 22.0026.00	+ Idle delivery:
> 1000s.: (20.0028.00)	+
9th speed 1/min: 2250	1st speed 1/min: 485
Charge press. hPa: 1000	+ KSB/AFB
KSB/AFB	+ valve > Volt: 12
valve > Volt: 12	+ Shutoff
Shutoff	electromagnet Volt: 12
electromagnet>Volt: 12	+ Del. quantity cm3/: 8.0010.00
Del. quantity cm3/: 35.2037.80	+ > 1000s.: (6.0012.00)
> 1000s.: (34.2038.80)	+ 2nd speed 1/min: 460
10th speed 1/min: 1800	+ KSB/AFB
Charge press. hPa: 1000	+ valve > Volt: 12
KSB/AFB	+ Shutoff
valve > Volt: 12	+ electromagnet>Volt: 12
Shutoff	+ Del. quantity cm3/: 13.5018.50
electromagnet>Volt: 12	+ > 1000s.: ~
Del. quantity cm3/: 34.7037.70	+
> 1000s.: (33.9038.50)	+ High Idle:
12th speed 1/min: 1200	+
Charge press. hPa: 1000	+ 1st speed 1/mi: 540
KSB/AFB	+ KSB/AFB
valve > Volt: 12	+ valve > Volt: 12
	, ,,,,,,

Shutoff	+
electromagnet>Volt: 12	+ 1st speed 1/min: 1000
Del. quantity cm3/: 8.0010.00	Charge press. hPa: 1000
> 1000s.: (5.5012.50)	+ KSB/AFB
•	valve > Volt: 12
Rest delivery:	Shutoff
	electromagnet>Volt: 12
1st speed 1/min: 800	Del. quantity cm3/: 14.0016.00
KSB/AFB	> 1000s.: (12.5017.50)
valve > Volt: 12	1000011 (12.5011111.50)
Shutoff	Automatic starting fuel delivery:
electromagnet>Volt: 12	L Automatic Starting rule decivery.
Del quentity cm3/: 3.50 / 50	1st speed 1/min: 250
Del. quantity cm3/: 3.504.50 - 1000s.: (2.006.00)	KSB/AFB
/ 10005.: (2.000.00)	T KSB/AFB - Valve > Volt: 12
) and decondent about of delicence	
Load-dependent start of delivery:	Shutoff
Injqty.dif.measurement:	electromagnet>Volt: 12
4-1 4000	Del. quantity cm3/: 40.0050.00
1st speed 1/min: 1000 -	- 1000s.: -
Charge press. hPa: 1000	f
Injqty. cm3/ : -7.015.0 " -	2nd speed 1/min: 400
difference> 1000s.: -	- KSB/AFB
KSB/AFB -	valve > Volt: 12
valve > Volt: 12	- Shutoff
Shutoff	electromagnet>Volt: 12
electromagnet>Volt: 12	Del. quantity cm3/: 27.0037.00
2nd speed 1/min: 1000 -	> 1000s.: -
Charge press. hPa: 1000	
Inj.—qty. cm3/: 4.06.0 'Z	3rd speed 1/min: 100
difference> 1000s.: -	KSB/AFB
KSB/AFB	valve > Volt: 12
valve > Volt: 12	Shutoff
Shutoff -	electromagnet>Volt: 12
electromagnet Volt: 12	Del. quantity cm3/: 47.0047.00
	4.1
TD-travel dif.measurement:	4th speed 1/min: 100
correttore anticipo iniezione (SV):	- KSB/AFB
1st speed 1/min: 1000	valve > Volt: 12
Charge press. hPa: 1000	- Shutoff
TD-travel : -0.50.7"	- electromagnet>Volt: 12
difference> mm: -	- Del. quantity cm3/: 36.0052.00
KSB/AFB	- > 1000s.: -
valve > Volt: 12	-
Shutoff	- Shutoff electromagnet:
electromagnet>Volt: 12	-
2nd speed 1/min: 1000	- Cut-in
Charge press. hPa: 1000	- >min voltage : 10.0
TD-travel : -0.91.5 '	- Rated voltage : 12.0
difference> mm: -	Rated Vottage . 12.0
KSB/AFB	Mounting and accombly dimensions:
	- Mounting and assembly dimensions:
valve > Volt: 12	Nastaurkian
Shutoff	- Designation
electromagnet>Volt: 12	- K mm: 3.23.4
	- KF mm: 5.25.6
Part-load del.at 3rd injqty.	- MS mm: 0.71.1
terza fermo della portata	- Ya mm: 24.226.2
stop (EGR set)	- Yb mm: 53.764.3
scarico) (ARF)	•
gaz d'échappement-ARF)	- Remarks:
Spacing mm: 12.0	-
	•

Ya = Distance between VE flange and speed-control lever in idle position
Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

Z = Absolute delivery

Pump in stepped LDA

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.